United States Department of the Interior
Bureau of Land Management
Elko Field Office

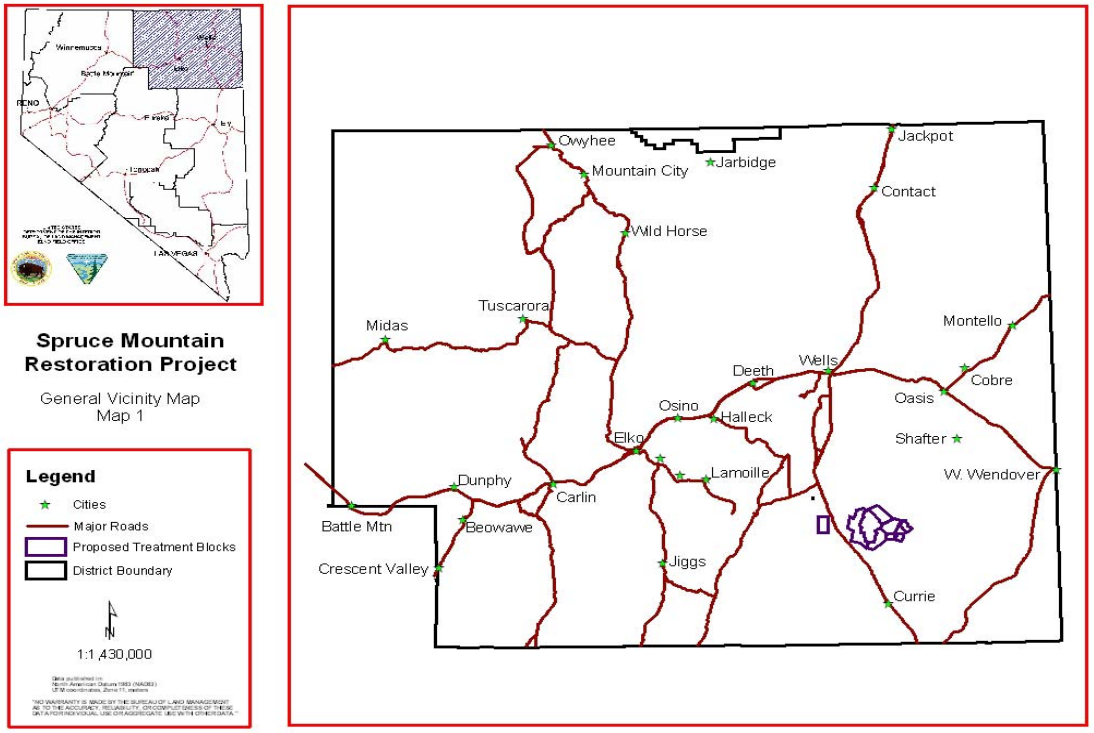
SPRUCE MOUNTAIN RESTORATION PROJECT

Environmental Assessment
BLM/EK/PL-2005/002
JA56, JDR # 6492
March 2005

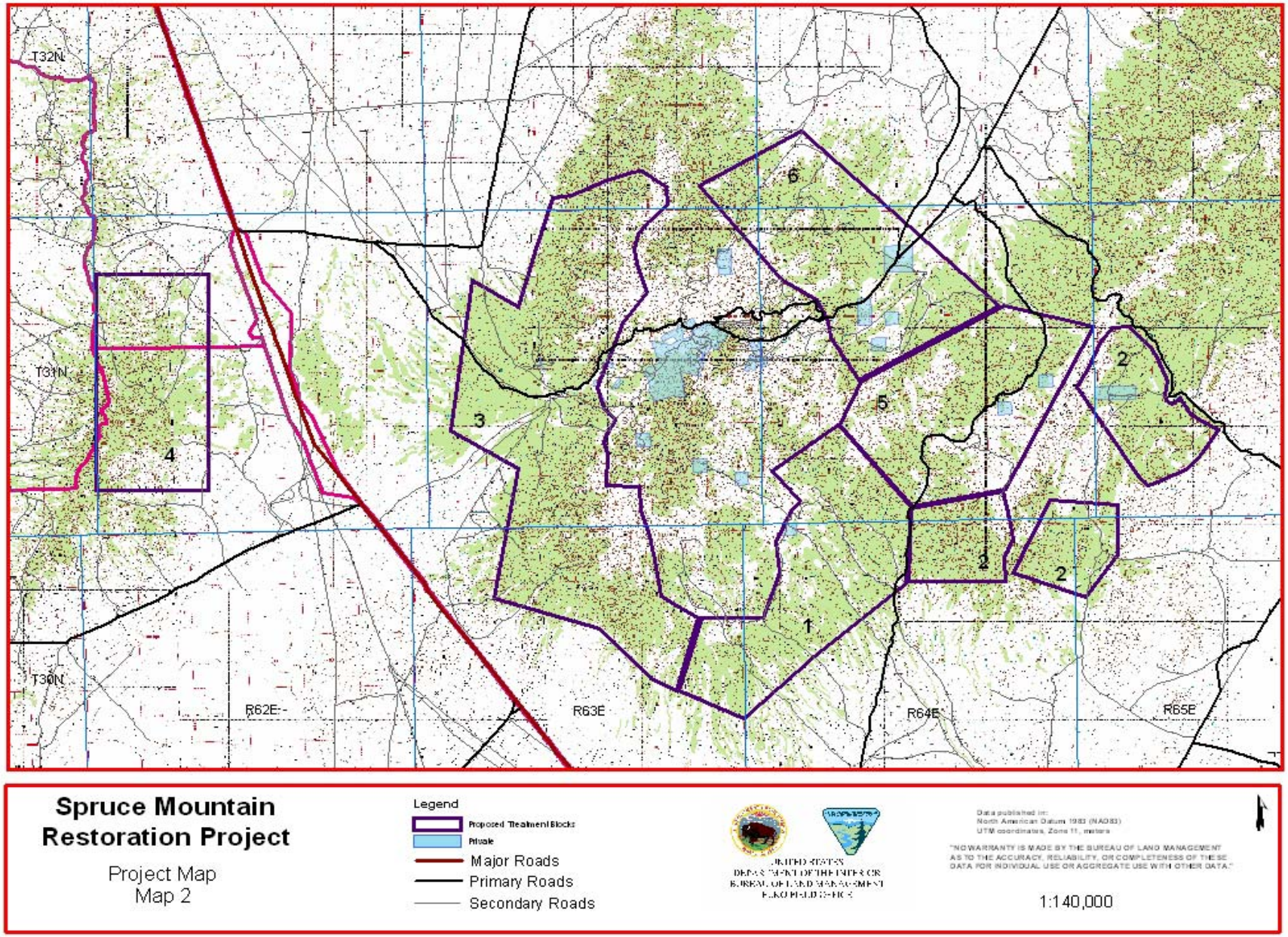
1 - INTRODUCTION

The Bureau of Land Management (BLM) Elko Field Office, in cooperation with the Nevada Department of Wildlife (NDOW), proposes to complete a hazardous fuels reduction project over a five to seven-year period which would allow for the restoration of wildlife habitat in the Spruce Mountain area in southeastern Elko County (See Map 1). This project would occur within the Spruce and Valley Mountain Allotments. These allotments are located approximately 30 miles south of Wells, Nevada spanning from Ruby Valley on the west side to the crest of the Goshute Mountains on the east side and encompassing an area of approximately 800,000 acres (see Map 2). This hazardous fuels reduction project would treat up to 16,000 acres of pinyon-juniper forest type communities and adjacent mixed conifer communities and up to 2,500 acres of sagebrush communities to improve wildlife habitat within crucial mule deer winter range.

Map 1. General Vicinity Map



Map 2. Project Map.



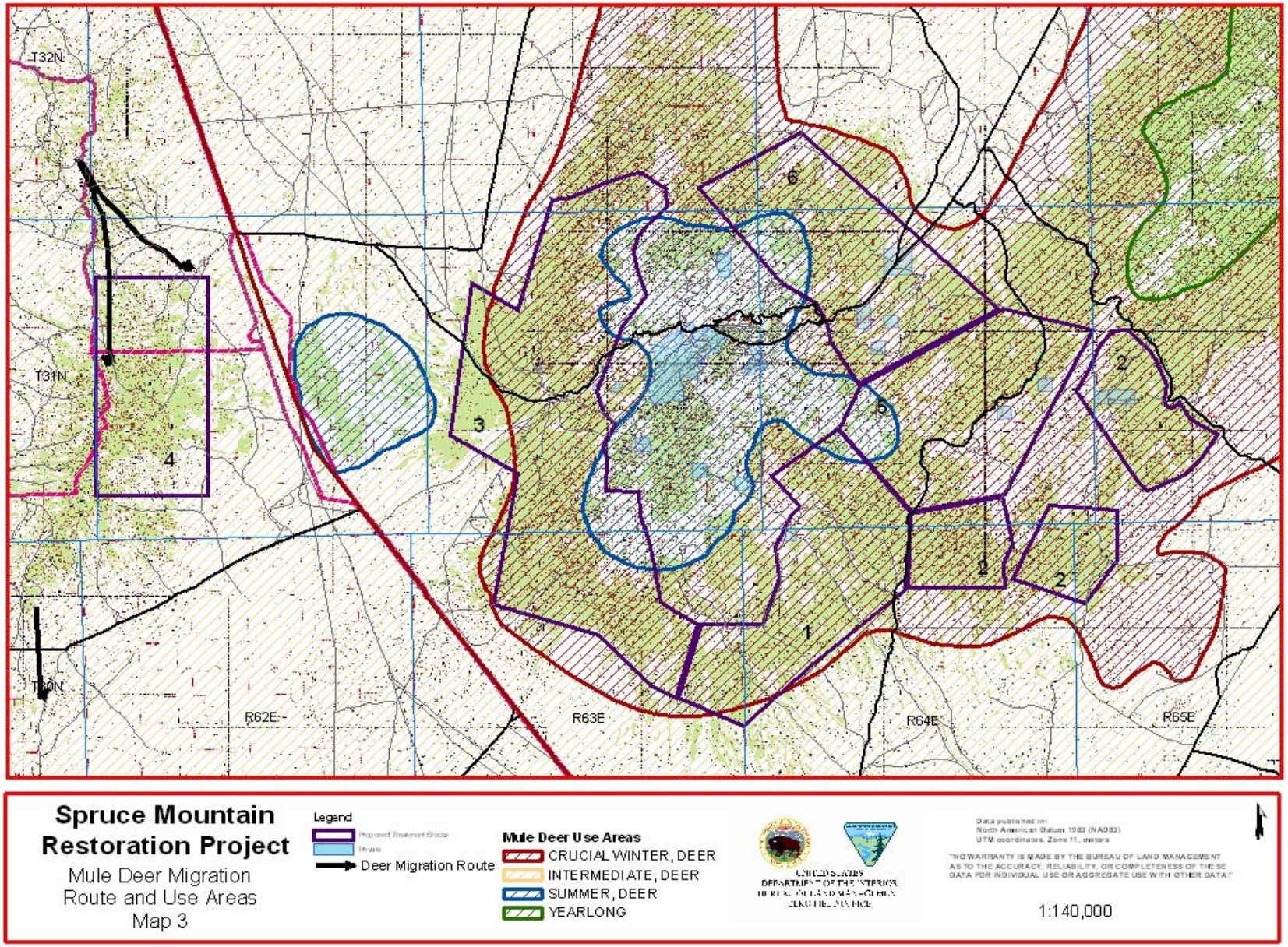
Treatment areas would be mostly concentrated within areas that are experiencing encroachment by pinyon-juniper or areas where pinyon-juniper is infested by diseases (such as bark beetle or mistle toe). Some areas of mixed conifer, predominantly white fir, may also be treated due to close proximity to pinyon-juniper proposed treatment areas. These white fir sites are being considered for treatment because they are also infested by diseases. The higher elevations of Spruce Mountain are dominated by mixed conifers, however, these areas are not being considered for treatment under this proposal. Those sagebrush communities that have been compromised by pinyon-juniper encroachment or where herbaceous understory species are less than adequately represented as suggested by range site descriptions are proposed for treatment Reduction of hazardous fuels within the Spruce Mountain area would improve overall forest health consistent with the Healthy Forest Initiative (HFI) and Healthy Forest Restoration Act, 2003 (HFRA). This environmental assessment (EA) has been prepared for compliance with the National Environmental Policy Act of 1969 (NEPA) as amended (Pub. L. 91-90, 42 U.S.C. 4321 et seq.), to analyze the effects the proposed action and alternatives would have on the human environment.

Background – The Spruce Allotment Evaluation process was initiated in 1995 and completed with the issuance of the Final Multiple Use Decision for the Spruce Allotment on January 30, 1998 (1998 FMUD). The1998 FMUD outlined the changes in management as well as changes in stocking rates that were necessary in order to attain the multiple use objectives and Standards for Rangeland Health for the Spruce and Valley Mountain Allotments. The Rangeland Program Summary (RPS) identifies one of the objectives for the Spruce Allotment to allow for the cutting or thinning of 16,000 acres of pinyon-juniper forest and the chaining or burning and seeding of 2,500 acres of sagebrush to enhance mule deer winter habitat.

The Approved Elko and Wells Resource Management Plans (RMP) Fire Management Amendment, dated September 29, 2004, outlines specific fire prevention activities which may be used to accomplish reduction in fuel loading. These activities are described for specific areas within specific polygons. A summary of the polygons within each allotment and the fire prevention activities preferred for fuel load reduction can be found in Appendix 1.

The Spruce Mountain area serves as the primary winter range for the majority of the mule deer which summer in the East Humboldt Range south of Wells, Nevada. The major migration route occurs through the Valley Mountain area (see Map 3). Per the NDOW, depending on population levels within the management area 10 (MA 10) deer herd, between 5 and 10 thousand deer can be expected to winter on Spruce Mountain. A study published in 1976 identified three major factors causing a decline of major mule deer winter habitat on Spruce Mountain. The three factors were improper livestock grazing, wild horse use and abuse, and pinyon-juniper encroachment into sagebrush/perennial grass communities. Since that study, several actions by the BLM have addressed some of the issues. The BLM completed the Wells RMP in 1985 and completed the Wells RMP Wild Horse Amendment in 1993. BLM issued the Final Multiple Use Decision for the Spruce Allotment in 1998. All of these actions combined have addressed the livestock grazing and wild horse issue by changing livestock grazing management and establishing appropriate management levels (AML) in order to attain multiple use objectives for the allotments. Some small scale projects (<100 acres) have been completed over the last several years. Through the new national forest health initiatives and this proposed action, issues related to pinyon-juniper encroachment and disease will be addressed.

Map 3. Mule Deer Migration Route and Use Areas



In 1962, BLM, in cooperation with the Nevada Fish and Game Commission, now NDOW, completed a 4,544-acre pinyon-juniper chaining in the vicinity of Sprucemont and Basco Springs on Spruce Mountain. Many studies were completed on the chaining to determine the benefits to mule deer. In summary, studies indicated that the upper portions of the chaining were beneficial to mule deer and more use by deer was recorded in the chaining than outside. The studies also concluded that more intensive treatment of smaller areas stressing complete tree removal and seeding of preferred species should result in longer lasting and more effective results in mule deer habitat improvement within the pinyon-juniper woodland. The 448-acre Honeymoon Chaining was completed in 1970 on the north end of Spruce Mountain. The chained areas are now in need of maintenance, that is, the young trees are threatening to compromise the value of the original projects for mule deer. Through this proposed action, the previously chained areas that are the most beneficial to mule deer will be retreated to restore the original value.

1.1 Need for Action

Studies show that the expansion of pinyon-juniper has more than tripled in the areas dominated by pinyon-juniper woodlands within the last 150 years. These changes have generally coincided with the introduction of heavy livestock grazing, tree utilization by the mining industry, and fire suppression that followed settlement of the region. An increase in tree dominance results in a loss of understory. A loss of understory further reduces the fuel and consequently fire frequency. Studies conclude that barring some major environmental change or management action, continued forage reduction and decreased fire frequency will continue until trees dominate most of the sites favorable to their survival. This continued tree dominance then jeopardizes the historic woodland sites because under the right conditions, a crown fire could result in a stand replacement wildfire with catastrophic consequences because of the continuous tree canopy. Studies further show that in pinyon-juniper communities where relative tree cover is over 60%, the ability of the understory to respond after a fire is dramatically reduced and potentially opens the site to the invasion by exotics. Any treatments or rehabilitation of these areas could be very costly. The need for this action is to:

- Promote healthy forests by removing stressed and diseased trees,
- Reduce hazardous fuels to reduce the threat of a catastrophic wildfire,
- Restore and maintain wildlife habitat, and
- Protect historic pinyon-juniper woodlands.

1.2 Land Use Plan Conformance

The proposed action and alternative described below is in conformance with the Wells Resource Management Plan; Issue 8 – Terrestrial Wildlife Habitat, Management Decisions #6 and #7 and Issue 10 – Woodland Products, Management Decisions #2, #3, and #4. It is also consistent with the January 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy and the Approved Elko and Wells RMPs Fire Management Amendment, dated September 29, 2004. In addition, the proposed action is also consistent with the Healthy Forest Initiative (HFI), the Healthy Forests Restoration Act, 2003 (HFRA), and with other Federal, state, and local policies and plans to the maximum extent possible.

2 - ALTERNATIVES

2.1 No Action

The No Action Alternative would mean that the restoration project would not be completed and there would be no changes to current conditions. Hazardous fuels would not be reduced. Dwarf mistle toe and bark beetle infestations would continue to spread. The threat of a large fire event that may cause a stand replacement fire would still exist. Crucial mule deer winter range would continue to degrade as a result of pinyon-juniper encroachment.

2.2 Proposed Action

The proposed action was developed in cooperation with NDOW and is the BLM's preferred alternative. The proposed action consists of treating up to 16,000 acres of pinyon-juniper, sagebrush, and mixed conifer communities primarily within the crucial mule deer winter range on the Spruce and Valley Mountain Allotments with the use of prescribed fire and/or mechanical devices. The 16,000 acres proposed for treatment have been divided into blocks by priority (see Map 2). While Blocks 1-3 are higher priority, treatments may be completed in any block as opportunities of funding, weather, and treatment method allow. It is anticipated that the project would be completed over a five to seven-year period; however, the time to complete the project would ultimately depend on annual funding and environmental conditions. The number of acres completed annually would be based on funding. All treatments would be completed on public lands.

The treated area would be completed in mosaic designs with irregular edges. Trees to be removed would include pinyon pine (*Pinus monophylla*), Utah Juniper (*Juniperus osteosperma*), and white fir (*Abies concolor*). Trees infested with mistle toe and bark beetles that occur within the treatment areas will be completely removed. Stands within the treatment areas would be selected to protect cavity trees, raptor nesting bird habitat, regeneration seed sources, historic woodland sites, and to maintain visual aesthetics of the area. No fencing is proposed as part of the proposed action. However, coordination would be completed on an annual basis with the permittees to inform them of the areas to be treated. Since the permittees rely on water hauling to move livestock, coordination would allow for some modifications in water hauling operations to minimize impacts on treatment operations and livestock grazing operations. Where applicable, the permittee may be asked to not haul water to certain locations to allow for recovery of treatment area. If this were to occur, it is anticipated that the request would be for no more than one growing season, but may be for up to two years or until establishment of seeded species. A determination would be made based on location of treatment to livestock water sources and type of treatment completed. If such modifications are requested, it would only affect summer grazing use areas on the Spruce Allotment.

Several years of drought in Nevada have stressed pinyon, juniper, and white fir trees in the Spruce Mountain area. Stressed trees are then susceptible to diseases like mistle toe and bark beetles. Bark beetles have multiple generations per year and have a tremendous capacity to increase their population. The number of multiple generations is dependent on climate and elevation. Most species have a regeneration cycle of approximately 3 weeks and thus it would be important to handle wood products carefully. The spread of bark beetle infestations is more of a concern when working in warmer temperatures.

Each treatment area would be evaluated to determine the most appropriate treatment type and resource protection measures based on slope, aspect, terrain, soil, vegetation composition, vegetation condition, amount of fuel/biomass needed to be removed, overall access on site, visual impairment, and proximity to major roads. The treatment areas would be designed by NDOW wildlife biologists and BLM resource specialists to represent, at a minimum, forestry, range, wildlife, fuels, soils, hydrology, recreation/VRM, and cultural.

Treatment areas would be focused in areas where residual herbaceous vegetation is adequate to promote native release. However, seeding of primarily native species would be completed in areas where existing herbaceous understory has been compromised and is not sufficient for native release. The treatments would be considered, either individually or in combination, to achieve the desired results. The treatments to be considered for each site include:

Burning

- Prescribed Burning (with or without seeding) – Prescribed burning would be completed during the spring months (March thru Mid May) or fall (October thru November). For spring burns, start date would be as early as possible after snow melt to allow for trees to burn with minimal impacts to the soil and understory herbaceous vegetation. Fall burns would begin based on prescriptions outlined in the burn plans for each specific treatment area. Prescribed burning would occur in blocks of 20-150 acres. Maximum acceptable size before suppression tactics are initiated would be 200 acres. However, if the prescribed fire entries threaten to exceed the 200-acre limit, the Burn Boss and on-site resource specialist would have the flexibility to determine whether or not to initiate suppression tactics based on fire behavior, topography, fuel continuity, potential threat for fire spread outside of the maximum allowable area (MAA), and risk to firefighter safety. Therefore, any variation in size would be based on resource specialist input. Burn patterns that allow "fingering" of the burned area to create a mosaic pattern may be one reason to consider a variation in size if it meets the objectives of this project.

  A burn plan would be completed for all treatment areas proposed for prescribed burning. Depending on the acres proposed for prescribed burning annually, it may be necessary to complete more than one burn plan for this project.

- Wildland Fire Use (with or without seeding) - Natural ignitions within the project area could be managed to achieve desired objectives if the environmental conditions allow the attainment of those objectives. For this option to be considered, an approved burn plan must have been completed for the specific area prior to allowing the ignition to burn. If a burn plan does not exist, full suppression efforts will be initiated.

If seeding is determined to be necessary in burned areas, either prescribed or wildland fire use areas, seeding would generally be completed by aerial application. Where terrain and slope allow, seed would be covered using all-terrain vehicles (ATVs), dozer, or other appropriate vehicle pulling a drag, chain, or other suitable device (vehicle/drag). Seeding would be completed in the fall/winter to take advantage of winter moisture.

Mechanical Treatments (with or without seeding) – Mechanical treatments would include:

- Roller Chopping (with or without broadcast seeding) – Roller chopping may be considered in slopes less than 8% due to equipment limitations and cost effectiveness. Roller chopping would generally be completed in the fall/winter, especially in areas that may need to be seeded to take advantage of winter moisture. If seeding of the area is necessary, seed would be broadcast using the seeder boxes on the roller chopper.
- Chaining (with or without seeding) - A 200-foot Ely chain would be pulled behind two D-8 Cats or combination of D-8 and D-7 Cats. All treated areas would be double chained and would generally be completed in the fall/winter. Seeding, if determined to be necessary, would be accomplished by: 1) Broadcast seeding behind the Cat on the first or second round, 2) aerial application after the first round, or 3) combination of both one and two.
- Other Mechanical Thinning (with or without seeding) – may include any other mechanical means of cutting trees from chainsaws to hydro-ax. Depending on the treatment, it may be possible to remove the biomass, chip, lop and scatter, or burn the slash piles. Biomass would include any material less than 4 inches in diameter. If material is lopped and scattered, it will be cut in no more than 2 feet long pieces and scattered no more than 2 feet high. Depending the mechanical device used and if seeding is necessary, it may be accomplished by aerial application or vehicle/drag and would be completed in the fall/winter.

Selective Cutting - Selective cutting may occur in specific areas and may include a single tree to several acres of trees. Selective cutting may include dead, diseased, or healthy trees depending on site evaluation. It may be necessary to cut healthy trees where there are no dead or diseased trees but the area needs to be thinned. Cut trees may be removed, chipped, lopped and scattered, or slash piles burned, based on site evaluation.

2.2.1 Special Design Features (applicable to all treatments):

Habitat Protection:

1. Treatment areas would be completed in mosaic designs with irregular edges.

2. Some trees may be marked for retention if they are deemed important for wildlife values or are survey line trees. Some trees may also be marked for "limbing" to reduce ladder fuels. True historic woodlands sites would be avoided.

3. Treatment areas would be seeded with mostly native species where existing understory is not sufficient for native release. Native species may include, but not limited to, Indian rice grass (*Achnafherum hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (*Festuca idahoensis*), basin wildrye (*Leymus cinerus*), blue flax (*Linium lewisii*), Basin big sage (*Artemisia tridentate tridentata*), and Wyoming big sage (*Artemisia tridentata wyomingensis*), Mountain mahogany (*Cercocarpos ledifolius*), and antelope bitterbrush (*Purshia tridentata*). Some non-native species, such as Ladak Alfalfa (*Medicago* spp.) and Delar small burnet (*Sanguisorba* spp.) may be considered to improve forage diversity for wildlife.

4. Where trees are cut, stump height will be less than 6 inches with all limbs removed.

5. No treatments would be allowed within a 3-mile radius of known bald eagle roosts during the critical wintering period of October 15 through April 15.

6. No treatments would be allowed within a 2.5-mile radius of known ferruginous hawk nest sites between March 1 and July 30.

7. Special design features would be incorporated for active nests of other species, to include such species as burrowing owls, golden eagles, and tree-roosting bat species, etc. These special design features would be designed based on site evaluation to determine treatment type. In most cases, it would involve leave areas or buffer zones based on treatment type and terrain. NDOW biologists would be involved in the design of these areas.

8. Some portions of the pinyon-juniper woodland are critical wintering habitat for several dozen bird species. Areas with high concentrations of wintering golden crowned kinglets, juncos, mountain chickadees, and Townsend's solitaires would be avoided. These critical wintering habitat areas would be identified by NDOW biologists.

Prescribed Burning:
A burn plan will be completed for any areas where it is determined that the treatment method will be prescribed burning.

Roads/Access:
1. Stipulations on off-road vehicle use by contractors or individuals administering the contract within and to and from the treatment area would be enforced when necessary because of fragile soils or extremely wet conditions.

2. New roads would not be built for access and old roads would not be mechanically maintained. Minor spot work may be completed in sections where it may be necessary for equipment access. Areas that are used for access to and from the treatment sites would be covered with slash or chipped material upon completion of the treatment to prevent access by other vehicles.

3. Any vehicle or equipment entering and exiting the treatment areas will be clean of any noxious weed plant parts.

4. A 200-foot buffer would be left between the proposed treatment area and major access roads within the project area to minimize visual contrasts and prevent off-highway vehicle (OHV) use. Selective cutting of dead or diseased trees would be allowed within the 200-foot buffer. Major access roads where this stipulation would apply are shown on Map 4.

Cultural:
1. A cultural survey and final flagging of the project boundary to avoid all eligible cultural sites will be completed prior to start of any on-the-ground project work.

2. If cultural resources are discovered during construction, activities which may damage or destroy such resources shall cease and the Project Coordinator shall be notified immediately.

3. Pursuant 43 CFR 10.4(g), the authorized officer must be notified, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), all activities must stop in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

***Engineering**:*
An engineering survey will be completed prior to start of any on-the-ground project work. Any known survey monument, witness corners, reference monuments, and bearing trees will be protected against any damage by any treatment activity.

Wilderness Protection:
Prior to treatment at the northern end of Block 2, the portion that is adjacent to the South Pequop Wilderness Study Area (WSA), the contractor and/or crews completing the work, would be advised of the proximity of the WSA and briefed on the importance of maintaining natural wilderness characteristics. Specifically, the following stipulations will be applied:

- No vehicles will be parked within the WSA and no motor vehicle use is permitted within the WSA boundary. Vehicle use is restricted to the boundary road of the WSA.
- No materials associated with the project will be stored within the WSA.
- Excess materials from the thinning project (slash, chipping products, etc.) will not be discarded or scattered within the WSA boundary.
- Prior to any burning in this unit, the prescribed fire burn plan will include specific directives to address wildfire suppression within the WSA in the event of an escaped prescribed fire.

Safety:
During period of high fire danger, all chainsaws or other equipment would be equipped with a functional spark arrestor. Woodcutters, contractors, etc., would be required to, at a minimum, have an axe and shovel on hand within the treatment area. No open fires would be allowed.

Public Coordination:
1. Annual meetings would be conducted with the permittees, Von L. Sorensen and Kenneth Jones, to inform them of anticipated treatment areas to be completed that year. Annual meetings would be coordinated with the Rangeland Management Specialist to ensure that there are no conflicts with any slight modifications to water hauling operations in the summer range of the Spruce Allotment.

2. Any camp areas used by individuals working on the project or contractors will be cleaned of all trash and removed from public lands.

3. Information describing the overall project, purpose and objectives, and schedule of treatment areas would be posted at the Spruce Mountain kiosk to promote public education and deter OHV use in the treatment areas.

Post Treatment:
Treated areas would be closed to wood cutting/harvesting until establishment of seeded species. Individuals would be notified when the areas are open to wood cutting/harvesting when purchasing wood cutting permits.

2.2.2 Monitoring and Evaluation

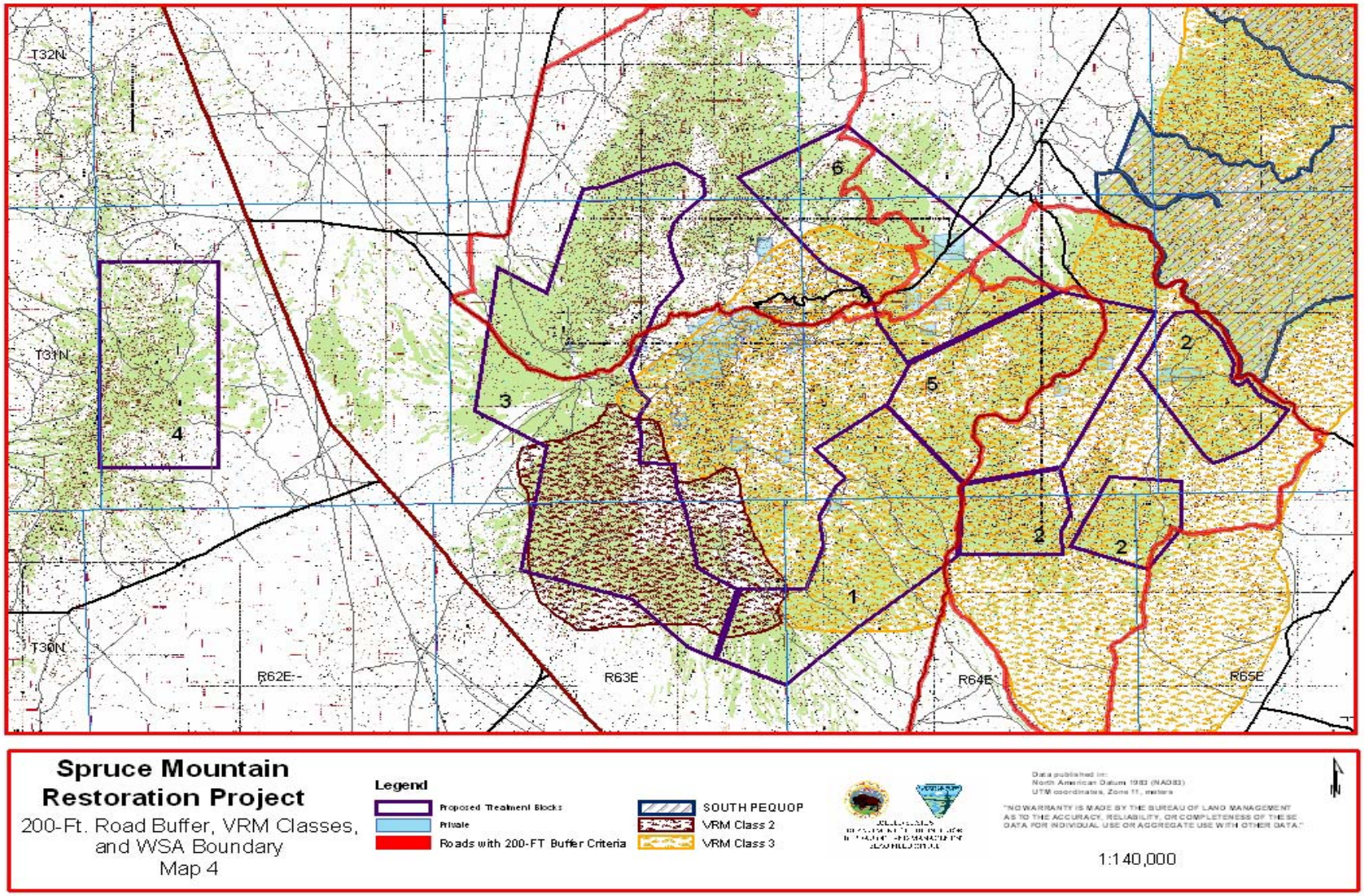
Standard Bureau contracting inspection procedures will be used by the assigned BLM project inspector during the completion of the treatments. Normal use supervision and vegetation studies will evaluate the effectiveness of the proposed action.

The hydrologist/soil scientist will monitor watershed conditions within 6 months, or following a large rain event, where slopes greater than 25% are burned. The hydrologist/soil scientist will establish photo points, complete a written report, and the information used for future recommendations.

All treatments will be monitored to ensure that the objectives of the treatment are attained.

In the future, treatment areas may be re-treated when it is determined by BLM resource specialists/NDOW biologists that regrowth and regeneration are compromising the value of the original projects for wildlife. A site evaluation would be completed by BLM resource specialists/NDOW biologists to determine if the original treatment method(s) would be used or if a different method(s) may be more appropriate to meet the desired objective. BLM resource specialists will represent, at a minimum, forestry, range, wildlife, fuels, soils, hydrology, recreation/VRM, and cultural. An example where a different treatment may be used could be a prescribed burn several years after a chaining to eliminate the young trees.

Map 4. 200-Foot Road Buffer, VRM Classes, and WSA Boundary.



2.3 Alternatives Considered but Eliminated from Detailed Analysis

Biological Treatment - Using biological treatments to reduce hazardous fuels and restore wildlife habitat was considered but eliminated from detailed analysis because this action would not meet the project objectives. The dominant vegetation type being treated is pinyon, juniper, sagebrush, and mixed conifer communities. A biological grazing treatment by goats, sheep, cattle, or even insects would result in loss of forage species not targeted for treatment.

Chemical Application – Under this alternative, an aerial application of Tebuthiuron would be applied. Designing treatments with irregular edges with an aerial application would be difficult. The chemical application would need to be completed during the growing season to be most effective. Based on the timing, mortality of shrub species would also occur, defeating one purpose of this project, which is to restore and maintain wildlife habitat, of which shrub and browse species are key components. In addition, the timing of application would also adversely affect sage grouse, other migrating birds nesting/brooding season, and potentially many other non-game species. Furthermore, there is a lot of pubic uncertainty and controversy surrounding the use of chemicals on public lands. This alternative was considered but eliminated from detailed analysis because this action would not meet the project objectives.

Reduced Acreage - An alternative was considered to complete smaller scale projects as funding was available, that is, reduced acreages. NEPA documentation would be completed on the smaller projects as funding was available. While this proposal was considered, it was eliminated from detailed analysis because this action would not meet the intent of NEPA and would actually be in violation of NEPA. The Rangeland Program Summary (RPS) identifies one of the objectives for the Spruce Allotment to allow for the cutting or thinning of 16,000 acres of pinyon-juniper forest and the chaining or burning and seeding of 2,500 acres of sagebrush to enhance mule deer winter habitat. A proposal to look at the entire mule deer winter range on Spruce Mountain and address the issues at one time was the preferred.

3 - AFFECTED ENVIRONMENT/ENVIRONMENTAL IMPACTS

General Setting – Most of the proposed treatments are within the pinyon-juniper zone around Spruce Mountain, that is, along the benches. Mixed conifer pockets occur adjacent to pinyon-juniper communities. These pockets of mixed conifer are not healthy and will be included as part of the treatments. Some treatments are proposed within the pinyon-juniper zone on the eastern side of Valley Mountain.

3.1 Critical Elements Not Affected

The following critical elements of the human environment are not present, so would not be affected by the proposed action:

- Areas of Critical Environmental Concern
- Farm Lands (prime or unique)
- Environmental Justice
- Hazardous or Solid Wastes
- Floodplains
- Wetlands/Riparian Zones
- Wild and Scenic Rivers

3.2. Effects of the Alternatives

Resources present and brought forward for analysis for each alternative are discussed by the following subsections.

3.2.1 Air Quality

The Spruce Mountain area generally has good air quality in that it is not near heavily industrialized or urbanized areas. U.S. Highway 93 bisects Spruce and Valley Mountains and generally runs north and south. There are historic mining communities on Spruce Mountain. The nearest community to the proposed project area is Currie, NV, which is approximately 14 miles south of the southern most edge of the project. The nearest ranch to the project area is the DM Ranch, which is approximately 11 miles southwest of the project. Lages Station is located about 30 miles south southeast of the project and the city of Wells and U.S. Interstate 80 are both located about 34 miles to the north of the project. Any special requirements for smoke management to address public concerns along the highway or communities would be covered by the burn plan.

No Action - Under the No Action Alternative, there would be no effects to the existing air quality within the project area.

Proposed Action - Smoke from any prescribed burning or wildand fire use could degrade air quality within the project area. Prevailing winds would minimize impacts for travelers along U.S. Highway 93. Smoke management measures would be specified in the burn plan. Smoke and particulate matter released into the atmosphere by burning would provide minimal impact to the public because of the remote location of the project area. There would be short term (24-36 hours) degradation to air quality in the project area while burning operations are taking place.

This degradation would be transitory in nature and would remain far below the State of Nevada Bureau of Air Quality emission standards.

3.2.2 Soils

There are 15 different soil map units in the proposed treatment area, and most have very small acreages so they won't be discussed individually.

Soils that are common in Blocks 2 and 3 (067, 575) and occur on steep slopes (>15%) are shallow over bedrock, have a high calcium carbonate content, high coarse fragment content, and a high water erosion hazard when they are disturbed. Dominant soils on steep slopes in Blocks 4 and 5 (532, 1150) are also shallow over bedrock, have both high calcium carbonate and coarse fragment contents, but these soils generally have a moderate water erosion hazard. All the soils that occur on slopes greater than 15% have rapid runoff.

Dominant soils in Block 1 (203, 554) occur on fan piedmont remnants and hills. They are shallow to deep, often have a duripan, high calcium carbonate content, and high coarse fragment content. The sites in Block 1 are generally not as steep as the others, and runoff is medium, and water erosion hazard is slight to moderate when the soils are disturbed. All the soils in the various treatment areas have medium textures, typically silt loams and loams.

Soils in the treatment area generally have a good biological soil crust cover. They occur in the interspaces between gravel on the lower fan piedmont remnant slopes. On the southern end of Spruce Mountain where limestone outcrops occur there is a very high crust cover which provides the soil surface a pinnacled micro topography. Sites with the densest crust cover occur on the most calcareous sites in the pinyon-juniper and mahogany vegetation types. Biological soil crusts are important for reducing wind erosion, inhibiting weed growth, improving infiltration, and preventing soil splash.

No Action - Current erosion rates would continue until the time a large wildfire occurs. Following a large wildfire, the soils would exhibit more hydrophobicity and larger areas would be burned. Higher erosion rates would occur and increased potential for gully formation.

Proposed Action – The following is a description of the effects by treatment:
Chaining – Chaining would cause the greatest surface disturbing impacts to soils of all the treatments. The surface would be disturbed when trees are uprooted causing destruction of soil structure, exposure of the subsoil, burial of biological soil crusts, and soil compaction. Chaining leaves small pits on the surface soil where the vegetation has been uprooted. These pits are beneficial for trapping water which limits post treatment runoff and water erosion. Soil impacts would be minimized by chaining in small areas and only working in areas that are inspected on the ground by the soil scientist. Areas that are dominated by juniper typically have large interspaced areas where there is little or no herbaceous cover. Several years after the chaining, more herbaceous cover would occupy the interspaces and provide better soil cover, providing for better infiltration, soil structure, and lower erosion rates.

Roller Chopping - Impacts from roller chopping would be small as there would be minimal surface disturbance and a mulch layer would be provided to protect the soil surface following the

treatment. Since this treatment is only going to be used on slopes less than 8% due to equipment limitations, the fragile soils that are located on the steep slopes would be avoided. Roller chopping would break up some of the biological soil crusts, but they would not be killed and would recover following treatment.

Mechanical Thinning – Soil impacts from mechanical thinning would depend whether the biomass is removed or scattered on site to provide surface cover. If the material is removed, the soil would be more susceptible to erosion because there would be less protective cover, and less precipitation would be intercepted. If the vegetal material is scattered on the soil surface it would provide protective mulch for the soil and reduce both wind and water erosion.

Prescribed burning – Prescribed burning would remove the vegetation and litter leaving the soil surface open to direct raindrop impact. Runoff would increase, as well as sedimentation. The magnitude of this impact would depend on the burn severity and the number and intensities of storm events before the soil is revegetated. The most sensitive areas are on the steep slopes. Rains in August 2004 caused gullies on these soils that were approximately two feet deep. Those soils have a high water erosion hazard when the vegetation is removed. Impacts will be minimized by timing the fire when intense storms are least likely to occur, burning in small blocks, avoiding the steepest sites, and following on site recommendations by the hydrologist/soil scientist. Several years following the burns, when the vegetation has come back, there should be better cover to reduce erosion rates. The chance of a large catastrophic wildfire which could cause extensive erosion would also be lessened with prescribed burning.

Biologic soil crusts could be destroyed in areas that are burned. However, lightly burned crusts still function to reduce erosion, so the benefits of small prescribed burns are better than what would happen with a large wildfire. Wildfires usually destroy crusts and leave the bare soil unprotected from wind and water erosion. Areas that are burned would be reseeded. As long as annual vegetation does not occupy the site following fire, the soil crusts would eventually return.

3.2.3 Water Quality, Surface/Ground

The project area is located in 4 different water basins where Spruce Mountain forms the divide between Independence Valley, Clover Valley, Steptoe Valley and Butte Valley. The only perennial surface water in the proposed treatment areas is associated with several springs at the higher elevations. Three major intermittent/ephemeral creeks occur on the east side: Brush Creek, Latham Creek, and Cole Creek.

Average annual precipitation ranges from 12 inches on the fan piedmonts to 18 inches on the upper slopes of Spruce Mountain. Most of the precipitation occurs during the winter as snow, or in the spring as rain. Intense summer thunderstorms also occur occasionally.

No Action - The amount of water that is intercepted, infiltrates, and runs off would remain the same until the time that a catastrophic fire would occur. A large wild fire would leave more bare soil, and increase the amount of runoff which would carry sediment downstream.

Proposed Action - The following is a description of the effects by treatment:

Chaining - Juniper typically forms a dense canopy which intercepts most of the raindrops, so little reaches the ground. Removal of juniper would allow rain to directly hit the soil surface and either runoff or infiltrate. The pits that are left by chaining would form small reservoirs. According to research done by Blackburn and Skau, 1974, there was no difference in runoff between chained and seeded sites and undisturbed sites 5 to 11 years after treatment.

Roller Chopper – Vegetation that is chopped and left on the soil surface would provide surface roughness which would reduce runoff and improve infiltration.

Mechanical thinning – If the vegetation that is thinned is scattered on site it would also increase surface roughness, thus improving infiltration and reducing runoff. If the vegetation is removed, there would be no interception of precipitation and no surface litter to reduce runoff velocities, so there would be high peak flows downstream.

Prescribed Fire - Runoff would increase following prescribed fire. The amount would depend on several factors: storm intensity and duration, soil moisture content, steepness of slope, hydrologic soil group, hydrophobic response, and size of burned area. The burn would be designed to minimize adverse hydrologic impacts and its limited size would further reduce any increase in runoff following the fire. There could be small areas where hydrophobic (water repellant) soils form, but the likelihood of that occurring with a prescribed burn, where soil temperatures are lower, is less than that with wildfire (higher soil temperatures). In the long term, runoff would be reduced following conversion of woody vegetation that typically has lots of bare interspaces to a more herbaceous type cover.

There would be little, if any, impact to water quality from the burn. The burn is designed to be relatively small and occur in a mosaic pattern. There are no perennial water sources immediately down slope of any of the treatment areas, and most of the sediment that would be produced from rain hitting bare soil, would be trapped by the unburned vegetative cover. If the burned area is seeded, there would only be a couple of years where higher water erosion rates would occur. If more vegetative cover results in the long term following the burn, runoff and sediment loss would be reduced.

3.2.4 Visual Resource Management

The project area is within VRM Class II, III and IV areas. The south, southwest and western exposures of Spruce Mountain, from the crest of the mountain to the lower edge of the pinyon-juniper zone, is in Class II (the extreme western edge of Block 1 and the southern half of Block 3). All of the remaining treatment blocks fall within Class III, with the exception of Block 5 where the northern half of this treatment block falls within Class IV. Refer to Map 4.

The Class II VRM objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Within Class II VRM areas, management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The Class III VRM objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should not exceed moderate. Management activities may attract attention but should not dominate the view of the causal observer. Changes should repeat the basic elements found in the predominant natural features of the landscape. Changes caused by management activities may be evident and begin to attract attention, but these changes should remain subordinate to the existing landscape.

The Class IV VRM objective is to allow for management activities which involve major modification of the existing character of the landscape. The level of contrast can be high, dominating the landscape and the focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of the characteristic landscape.

The characteristic landscape consists of the rounded to very steep mountains of the Spruce Mountain and the Pequop Mountains, with deep narrow canyons and limestone rock outcrops. Spruce Mountain gently slopes into the adjacent Clover, Independence and Goshute Valleys, with their shallow, sandy washes. Landscape colors include seasonal vegetation variations of green and gray-green to light yellowish tan and brown in the valley with dark green in the mountains (pinyon and juniper). Soil colors are primarily light tans and browns. Rock outcrop colors range from tan to gray. Texture is a uniform sagebrush community in the lower elevations with extensive pinyon-juniper woodland areas in the mid to higher elevations. Conifer trees (white fir and limber pine) are found at the highest elevation northern slopes and provide a unique and visually appealing mosaic in vegetation not typical in Great Basin landscapes.

Man-made features in the area are mostly linear including U.S. Highway 93, bladed dirt roads, two-track roads, jeep trails, and fences. Man-made features are a dominate feature of the landscape in the Sprucemont and Black Forest areas. These features include large mining waste piles and tailings, old mine buildings in various stages of deterioration, and old mining equipment (dozers, trucks, etc.).

No Action - There would be no effects to the existing visual qualities in the Spruce Mountain area.

Proposed Action – Within VRM Class II, the treatments will introduce new color and texture into the existing landscape. The degree of contrast with existing natural conditions can be reduced to be in conformance with Class II guidelines. For example, the special design features, including mosaic patterns, will emulate natural openings. The mosaic design of the treatments will be such that they may be seen, but they will not attract the attention of the casual observer.

Within VRM Class III, the treatments will allow for retainment of the existing character of the landscape. VRM Class III objectives allow for treatments to be evident and begin to attract attention, but not dominate. The mosaic design will repeat the basic elements found in the predominant natural features of the landscape.

Within VRM Class IV, the requirements will be met. The mosaic design will minimize visual impacts.

A VRM specialist would be a part of the evaluation team to determine the treatment type(s) for a specific area and provide input on special design features needed to ensure attainment of VRM objectives.

3.2.5 Recreation

The majority of recreation opportunities within the area consist of dispersed use; there are no developed recreation facilities or sites in the area. The level of recreation use for the entire Wells Resource Area is estimated through the Recreation Management Information System (RMIS); however, it would be difficult to provide a reasonable estimate of the number of recreation user days for all activities that occur in the project area.

Off-highway vehicle motorized recreation is popular throughout the area. Competitive off-highway vehicle and motorcycle races have been occurring in this area since the 1980s. Other recreation activities include: four-wheel driving, hunting, camping, mountain biking, horseback riding, bird watching, wildlife watching (deer, elk, and antelope), viewing historic and cultural sites, hiking, firewood and Christmas tree cutting, and pine nut gathering. The area is designated "open" to off-road vehicle use under the Wells Resource Management Plan (1985).

A designated OHV Trail that would traverse the main roadways through the treatment blocks has been proposed. The opportunity to use OHVs on public lands around the Spruce Mountain area is currently being advertised by the Elko Convention and Visitors Authority. If designation follows, OHV use is expected to increase in the area. The proposed trail would include a staging area and primitive campground along the main road, near the northwest corner of Block 3. It would be reasonable to estimate that the current level of OHV use (4WD vehicles, ATVs, motorcycles) is probably highest during the fall hunting season, with only light to moderate levels of use occurring during the late spring and summer months. Winter snowmobiling use is estimated to be light also due to the lack of deep, reliable snow cover over the majority of the area. The project area is very popular for deer hunting, especially at the end of the deer season in late October/early November following the migration of deer onto Spruce Mountain. Mountain lion hunting (typically guided hunts) occur from late December through March. Trapping of fur bearing animals also occurs on Spruce Mountain. Hunting for "sheds" (shed antlers) is popular in the spring months (April-June) due to the concentrations of deer and elk in the area, especially in Block 1.

Christmas tree cutting (8 ft. or smaller pinyon pine trees) is a popular family activity in the area, especially in Blocks 3 and 5 along the main roads. This activity occurs from late November until mid-December.

No Action - The publics' ability to fully utilize the Spruce Mountain area for a variety of recreational pursuits would not be affected. OHV users would still be able to enjoy riding through the dense pinyon-juniper woodlands which they consider to be a positive experience since woodlands are an attractive feature. Pine nut gathering, Christmas tree cutting, and firewood gathering activities would not be affected. Wildlife viewing opportunities would not be affected. Hikers to the top of Spruce Mountain would not find the view of natural landscapes altered.

Recreationists who pursue hunting activities (deer and elk hunting), as well as mountain lion hunting activities, would not find their experience and opportunities enhanced with selection of this alternative.

Proposed Action – Implementation of the proposed action may affect the publics' ability to fully utilize the Spruce Mountain area for some recreational pursuits, such as pine nut gathering and Christmas tree cutting. Most of the pine nut gathering and Christmas tree cutting occurs along the main roads and thus may not be adversely affected as most of the treatments are proposed away from main roads. However, some treatments may be completed near main roads and may affect pine nut gatherers and Christmas tree cutters. However, implementation of the proposed action may be viewed as negative by certain groups of recreationist that use the Spruce Mountain area. OHV users would generally consider removal of any trees along the road system that they use to be negative, since riding through dense forested areas is an attractive feature. However, treatments area not proposed to be completed adjacent to roads and a minimum proposed buffer has been identified, therefore, any negative impacts would be reduced. With the "open" designation to off-highway vehicle use within the district, proposed designation of an OHV Trail, and along with expected increase in public use, especially during hunting season, it is reasonable to anticipate use by off-highway vehicle use within the treatment areas. By posting information as to the overall project description, purpose, and objectives at the Spruce Mountain kiosk, public awareness and education would help to deter OHV use within the treatment areas. Wildlife viewing opportunities may have both positive and negative effects, depending on the response by the various species of wildlife that inhabit the pinyon-juniper woodlands. One anticipated positive benefit to wildlife viewing would be the opportunity to view mule deer, if the habitat is improved and numbers of deer increase as projected. However, it is estimated that the area receives very light visitation for wildlife viewing during the months of December through March when deer are concentrated on the winter ranges. In addition to mule deer, elk viewing opportunities would be available year long due to anticipated dispersal of elk throughout the project area as a result of increased forage diversity and availability.

Hikers to the top of Spruce Mountain and high points within the South Pequop WSA would find the view of natural landscapes altered through implementation of the proposed treatments. This may be a negative effect to some hikers. However, proposed treatments would be completed in mosaic designs to blend in with the natural surrounding landscape and would minimize visual impacts.

Recreationists who pursue hunting activities (deer and elk hunting), as well as mountain lion hunting activities, could find their experience and opportunities enhanced with implementation of the proposed action due to the increased numbers of mule deer and elk. The opportunity for firewood gathering activities would not be affected. In some areas, this activity may increase.

3.2.6 Wilderness

A portion of the project area (extreme northern boundary of Block 2) runs parallel to the southern boundary road of the South Pequop WSA. Approximately 2 miles of the boundary road, in T. 31 N., R. 65 E., Sections 17, 18 and 20 is followed. Refer to Map 4.

The WSA is predominately natural with densely-forested, highly-dissected terrain. Traces of man-made features are minimal. Vegetation ranges from sagebrush and grasses on the south-facing slopes to dense stands of white fir and limber pine on the northern exposures. Pinyon-juniper woodlands occupy much of the mountain range, while nearly impenetrable shrub thickets cover many slopes. The WSA has outstanding opportunities for solitude with many steep canyons and ridgelines.

The southwest portion of the WSA, where the project is proposed, is mostly an open canopy of pinyon-juniper forest with little to no understory that has resulted from grazing and fire suppression.

Features that were described in the original inventory of the WSA in 1980, that are in close proximity to the project area include water tanks and approximately ¼ mile of vehicle route or "ways" going into the WSA itself. These are inventoried ways, meaning they were present in 1980 when the inventory was finalized. The area has been recommended as suitable for wilderness designation (Elko District Wilderness Report, 1991).

No Action - Selection of the no action alternative would not affect wilderness values in the South Pequop WSA. Natural process outside the WSA would be allowed to continue, and would therefore, mimic the conditions of naturalness contained within the WSA. The majority of wilderness visitors would view this lack of contrast between wilderness (naturalness) and the adjacent non-wilderness as a positive benefit.

Proposed Action - Implementation of the treatments would not affect wilderness values in the South Pequop WSA with inclusion of the Special Design Features. The proposed treatments outside of the wilderness would allow for the break up of continuous fuels which currently are a threat to the area and could result in catastrophic stand replacement fire. Natural processes outside the WSA would be altered and would create a contrast with the conditions of naturalness contained within the WSA. It is anticipated that advocates of wilderness that visit the area would view this contrast between wilderness (naturalness) and the adjacent non-wilderness as a negative benefit.

3.2.7 Invasive, Non-native Species

According to the Elko Field Office data (see Map 5), known noxious weeds within the proposed treatment areas includes Scotch thistle (*Onopordum acanthium*) and Hoary cress (*Cardaria draba*). Some scattered patches of cheatgrass (*Bromus tectorum*), an annual non-native species, occurs within the project area.

No Action - Noxious weeds would continue to exist and spread based on natural conditions of seed and vegetative propagation. The potential for the spread of cheatgrass would increase in the event a wildfire occurs. Through rehabilitation efforts, this spread would be reduced, but would be more costly.

Proposed Action - The disturbance activities associated with the Proposed Action have the potential to spread the existing noxious weed infestations. The Special Design Features should minimize the spread of existing noxious weed infestations. Implementation of the treatments

would decrease the risk of a wildfire and associated risk of cheatgrass and other noxious and non-native species from infesting the area.

3.2.8 Vegetation

Dominant vegetation communities within the treatment areas include the following (see Map 6):

- Pinyon-juniper woodlands
- Pinyon pine woodlands
- Black sagebrush with little understory
- Wyoming and Basin Big sagebrush with bluebunch and Idaho Fescue understory
- Mountain Sagebrush/Bitterbrush with bluebunch and Idaho Fescue understory.

No Action - Pinyon-juniper would continue to encroach on sagebrush communities and reduce or eliminate the any herbaceous understory. With the increase dominance of shrub and tree species the plant communities would loose their diversity, which would impact wildlife and wildlife habitat. Any fires in the pinyon-juniper and sagebrush communities that have lost their herbaceous component and seed source would likely cause the community to become dominated by invasive annuals.

Areas infected with dwarf mistletoe would continue spreading and allow for the predisposition to insect infestation and other diseases.

The Wyoming and Basin sagebrush communities would continue to lose diversity as canopy covers increase. The increase would result in lower seral conditions as perennial grasses and forbs diminish. The Mountain sagebrush/bitterbrush communities would continue to lose diversity. Grasses and forbs would gradually be replaced with shrub dominated species.

Proposed Action - With the proposed action, Wyoming/Basin sagebrush and non sprouting shrubs would be reduced. The reduction of sagebrush would reduce competition and release nutrients for established grasses and forbs. The decrease in competition and release in nutrients would benefit established grasses and forbs as well as providing for age class diversity in both sagebrush and pinyon-juniper regeneration resulting in communities being less susceptible to fire and disease.

The proposed action in the Mountain sagebrush/bitterbrush communities would favor species such as rabbitbrush and snowberry. These species are quick to re-sprout and dominate the site.

Where understory is lacking or species diversity is lost, seeding of the areas would allow for increased species diversity.

The proposed action would improve pinyon-juniper woodlands by removing infected trees. The selective removal of trees would release water and nutrients and allow remaining trees to grow stronger and more resistant to disease and pests. This would improve overall forest health.

Table 1 below summarizes the anticipated vegetative response over time following completion of the proposed treatments. The vegetative response is anticipated to be similar from all the proposed treatments.

Table 1. Anticipated response following proposed treatments over time.

Time	Anticipated vegetative response:
Short Term (1-10 years)	Forbs and grasses would dominate the treated site. In addition, even-aged sprouts would begin to colonize on the treated areas.
10-30 years	A slight reduction in understory species would occur, especially in areas where young, dense even-aged to clusters of even-aged trees would begin to establish.
Long Term (over 30 years)	Larger even-aged trees would dominate the treated sites, resulting in a higher reduction in understory species.

3.2.9 Forestry/Forestry Products

The proposed treatment area is in pinyon-juniper woodlands vegetative community. The site is dominated by Utah juniper *Juniperus osteosperma)* intermixed with single leaf pinyon pine *(Pinus monophylla)*. At the present time, an ocular estimation of site tree species composition is 80% juniper and 20% pinion pine. The majority of trees in the proposed treatment area are mature to overmature with all age classes being represented. The canopy closure of the stand ranges from approximately 30-60 percent throughout the proposed treatment area. The lower tree densities can be found in the lower elevation transition zones with higher tree densities located in the upper elevations and drainages. Stand competition, combined with six years of drought, has stressed the stand, leaving the stand more susceptible to insects and diseases.

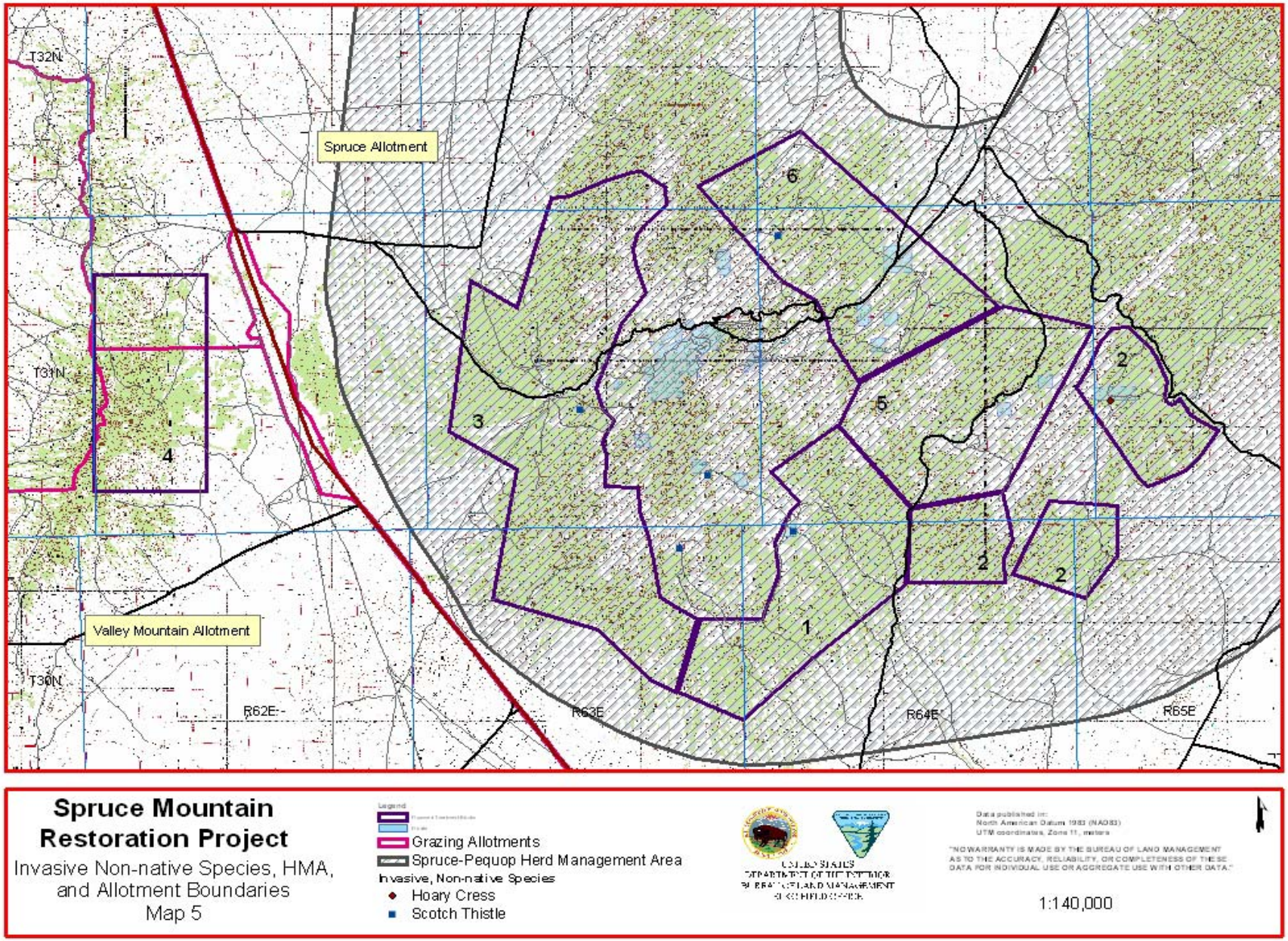
The treatment of white fir (*Abies concolor*) in close proximity to pinyon-juniper zones would ensure survival of these stands through reduced competition and removal of diseased trees. These stands currently exhibit one age class and approximately 10% of these stands are dead standing and down trees.

Present bark beetle populations appear to be within expected tolerances under the current climatic cycles. Mistle toe infestations can be found scattered through out the project area. It is reasonable to expect that without treatment and under continued drought conditions, the insect and mistle toe populations will increase.

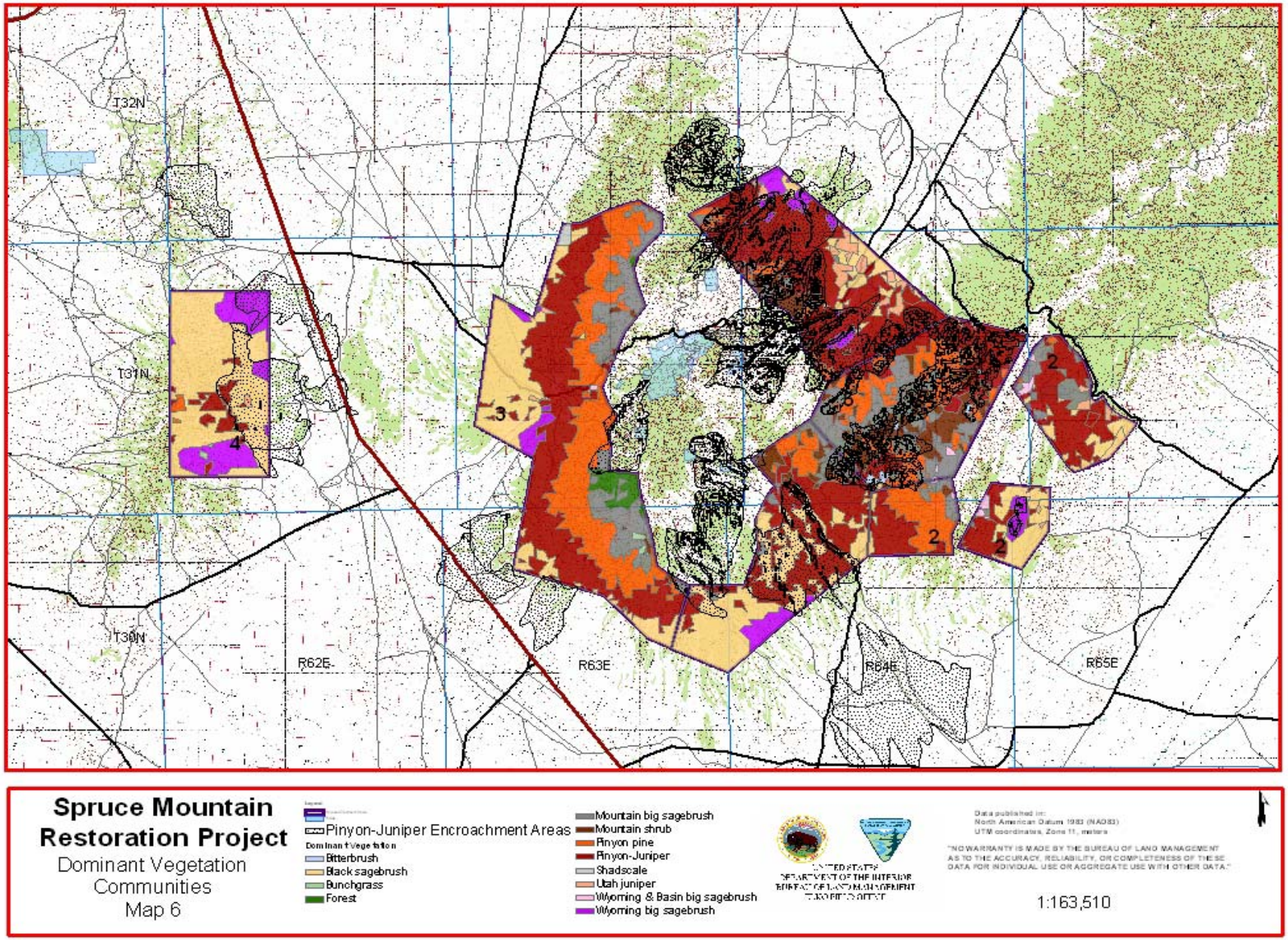
Currently only noncommercial forest product sales occur on the public forested lands within the Spruce Mountain area. Forest products sold from these areas include Christmas trees, firewood, posts and pine nuts. In recent years, the harvesting of these products has been found to occur in areas adjacent to the existing road system. Little to no evidence of recent harvesting of forest products has been found in the treatment area. This project would not impact the current levels of harvesting of commercial or non-commercial forest products due to the location of the treatment area being located away from the existing road system.

No Action – No action would result in tress becoming increasingly stressed with mortality coming from insect infestations and disease. Age class distribution would shift increasing mature and over mature trees with less sapling and pole sized trees. Understory vegetation will continue to decline as stand canopy closes. Stand will become more susceptible to stand replacing fires and large scale insect infestation and disease.

Map 5. Invasive Non-native Species, HMA, and Allotment Boundaries.



Map 6. Dominant Vegetation Communities.



Proposed Action - The proposed treatment would reduce tree numbers initially and open up areas within the stand to revegetation. Competition within the stand would be reduced, thus providing a healthier stand. Herbaceous cover would inhabit treatment areas over time adding more plant diversity to the site. Areas of dense closed canopy and limited understory vegetation may be slow to respond after treatment due to the lack of seed source. Seeding may be needed to revegetate these sites in a timely manner.

Care must be used when disposing of biomass from treatments. Large accumulations of biomass will promote forest pest infestations and disease into an already stressed stand. Burning minimizes the biomass remaining after treatment and is the preferred method of treatment. Selective cutting and thinning with chipping and/or lop and scatter is preferred over mechanical treatments (chaining or roller chopper). Lop and scatter treatments should be scattered to minimize the fuel bed depth. Cut material should not be more than two feet in length. These actions will minimize the ability for treated biomass to hold moisture and provide favorable conditions for forest pests. Mechanical treatments injure trees and provide a vector for forest pests to become established. Care should be used to not damage leave trees during treatment. Timing of treatments is important in reducing the impacts of forest pests. Treatment when insects are most active, in mid summer, should be avoided. Treatments should allow for treated biomass to dry prior to mid summer.

Treating this area, should provide a healthier forest of uneven aged trees, with tree numbers more evenly distributed through out the different age classes.

3.2.10 Wild Horses

The proposed project area would occur within the Spruce-Pequop Wild Horse Herd Management Area (HMA) (see Map 5). There are approximately 200 wild horses in and immediately outside the HMA. Wild horses have been observed in the area during all times of the year.

No Action - There would be no disruptions to wild horses, that is, no noise or activity they may cause temporary displacement. Without completion of the project, sagebrush dominated communities would continue to loose diversity and in turn decrease available forage for wild horses.

Proposed Action - Increased human and motorized activity could disrupt and displace wild horses. The bands inhabiting the area of the proposed project would likely temporarily leave the area and move away from the noise and activity. Completion of the project would provide increased habitat for wild horses.

The proposed project would present visitors an increased opportunity for the observation and appreciation of wild horses in a natural range setting.

3.2.11 Range/Grazing

The Spruce Allotment Evaluation and the subsequent 1998 FMUD addressed several issues that resulted in management changes to the current grazing systems on the Spruce and Valley Mountain Allotments (see Map 5). The current grazing permittees are Von L. Sorensen for the

Spruce Allotment and Kenneth Jones for the Valley Mountain Allotment. This proposed action will not affect the permittees' grazing privileges.

It is the intention to complete treatments in areas away from livestock waters. However, in some cases, a water source may occur near a treatment and it may receive some livestock use. Therefore, as projects are implemented, coordination with the permittees will ensure that water sources that may occur near treatments are not used to prevent livestock drift into the treated area. Coordination will occur prior to the start of the grazing season to give the permittees plenty of time to adjust their grazing rotation as necessary.

No Action - Sagebrush dominated communities would continue to lose diversity and which would in turn decrease the available forage to livestock.

Proposed Action - Livestock may be impacted in the short term, but would benefit in the long term from the increase in forage. This would allow more palatable forage in areas that they might otherwise avoid.

3.2.12 Wildlife

The Spruce Mountain area is designated as crucial winter range for mule deer. In any given winter, up to 80% of the deer from the East Humboldt Range (approximately 8,000-10,000 individuals at 2004 population levels) winter on Spruce Mountain. A small herd of mule deer summer in the upper elevations of Spruce Mountain. The Valley Mountain area is considered mule deer spring/fall transition range and is the main corridor between the summer/winter ranges. Refer to Map 3.

The southern portions of the project area are classified as pronghorn antelope summer range (see Map 7).

The Spruce Mountain area serves as year long elk habitat per the NDOW (see Map 8). Since 1998, the BLM, in cooperation with the NDOW and local sportsman groups, has constructed nine wildlife water developments within the proposed project area. These developments have helped elk meet their water requirements and have allowed them to disperse over a larger area.

Water sources are limited in the Spruce Mountain area. Latham, Basco, Upper and Lower Spruce, and Townsite Springs are located outside of the proposed project area. Upper Boone Springs are located within the project area, however, no treatments are proposed immediately adjacent to the springs due to private lands and in order to leave protective vegetative cover for wildlife. The remaining water sources within the Spruce Mountain area include 3 stockwater wells, 10 spring fed troughs, 7 water hauling sites, and 5 spring sources. Wildlife and livestock are dependant on these sources for water during the late spring through early fall months (May-October).

The project area also provides habitat for a variety of nongame birds and mammals. Common species include blacktailed jackrabbits, cottontail rabbit, coyote, bobcat, Townsend's and Belding's ground squirrels. Other common sagebrush obligate species known to occupy the project area include Brewer's sparrow, loggerheaded shrike, prairie falcon, sage sparrow, sage

thrasher, sagebrush lizard, sagebrush vole, and Swainson's hawk. In addition, the project area provides nesting and foraging habitat for ferruginous hawks. Ferruginous hawk nests are known to exist in the vicinity of the project area. Telemetry data from the Valley Mountain area suggests that ferruginous hawk females conduct 90% of their foraging behavior within 2.5 miles of an active nest.

No Action - Mule deer, pronghorn antelope, and elk would not benefit from the forage diversity that would result from the proposed treatments. Crucial mule deer winter range would continue to degrade as a result of pinyon-juniper encroachment.

Proposed Action - The proposed project would be located within mule deer spring/fall transition, and crucial winter range. The proposed project would result in a reduction in the pinyon-juniper canopy within the transition and winter range. Mule deer would benefit from the increase in herbaceous understory, and increase in browse species such as sagebrush and bitterbrush as a result of the treatments within this area.

Pronghorn antelope use within the project area is currently limited due to pinyon-juniper encroachment. The lower elevational areas of the proposed project area may result in increased use of the area by pronghorn.

Elk will make increased use of the project area year-round due to increased forage diversity and availability resulting from proposed treatments.

The proposed project area provides existing and potential habitat for as many as twenty sagebrush and pinyon/juniper obligate wildlife species. The frequency of occurrence and dependency of the various species upon the project area for their biological requirements varies based upon the ecological condition of the sagebrush, pinyon/juniper habitat. Some sagebrush obligate species thrive in a more shrub-dominated ecological condition, while most prefer a more diverse shrub/herbaceous community. Conducting treatments outside the nesting season for passerine birds would significantly reduce potential impacts. In general, treatments in the Spruce and Valley Mountain Allotments are not proposed to be conducted during the breeding and nesting season. However, prescribed fire may be conducted during March through mid-May, depending upon weather and site conditions conducive to successful treatment results. Any prescribed burning that may be completed in the month of May would be completed at the discretion of the BLM and NDOW biologists. In the short term, the proposed treatments would result in potential displacement and/or direct mortality of some small mammals and birds within treated areas. The greatest direct impacts would be from prescribed fire treatments conducted during the breeding season of passerine birds. In the long term, the proposed treatments would improve habitat for sage brush and pinyon/juniper obligate species by creating a mosaic of sagebrush and pinyon/juniper age classes and improved overall diversity. Implementation of the special design features would help minimize the impacts to these species.

The proposed action would allow for the removal of pinyon-juniper to open up areas to restore the sagebrush community understory. This action would directly benefit mule deer, sage grouse, and other sagebrush obligates because it would restore wildlife habitat that has been compromised due to pinyon-juniper encroachment. Pinyon-juniper is important for mule deer as

it provides "thermal cover", but too much pinyon-juniper can also be detrimental due to the loss of understory, especially browse species like sagebrush and bitterbrush.

Without the reduction of hazardous fuels, there is an increased probability for a catastrophic stand replacement fire that will certainly have significant impacts on all wildlife species.

3.2.13 Migratory Birds

On January 11, 2001 President Clinton signed the Migratory Bird Executive Order. This executive order outlines the responsibilities of Federal agencies to protect migratory birds. A list of the migratory birds affected by the President's executive order is contained in 50 CFR 10.13. References to "species of concern" pertain to those species listed in the periodic report "Migratory Nongame Birds of Management Concern in the United States", priority migratory bird species as documented by established plans (such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas) and those species listed in 50 CFR 17.11.

The proposed action is located within or adjacent to montane shrub, sagebrush, and pinyon/juniper habitat types. The Nevada Partners in Flight Bird Conservation Plan identifies the following bird species, listed in Table 2, associated with each of these eco-types (Nevada Partners in Flight Bird Conservation Plan, 1999):

Table 2. **Summary of bird species associated with pinyon-juniper, sagebrush, and montane shrub eco-types within the Spruce Mountain Restoration Project Area, as defined by the Nevada Partners in Flight Bird Conservation Plan.**

Pinyon-Juniper	Sagebrush	Montane shrub
Obligates*	**Obligates***	**Obligates***
Pinyon Jay	Sage Grouse	None
Gray Vireo		
Other**	**Other****	**Other****
Ferruginous Hawk	Black Rosy Finch	Black Rosy Finch
Gray Flycatcher	Gray Flycatcher	Black-throated Gray Warbler
Juniper Titmouse	Vesper Sparrow	Calliope Hummingbird
Mountain Bluebird	Sage Sparrow	Cooper's Hawk
Western Bluebird	Swainson's Hawk	Loggerhead Shrike
Virginia's Warbler	Calliope Hummingbird	Blue Grosbeak
Black-throated Gray Warbler	Ferruginous Hawk	Vesper Sparrow
Scott's Oriole	Loggerhead Shrike	MacGillivray's Warbler
	Prairie Falcon	Orange-crowned Warbler
	Sage Thrasher	Swainson's Hawk
	Burrowing Owl	Western Bluebird
	Other associated species	
	Brewer's Sparrow,	
	Western Meadowlark,	
	Black-throated Sparrow	
	Lark Sparrow	
	Green-tailed Towhee	
	Brewer's Blackbird	
	Horned Lark	
	Lark Sparrow	

* "Obligates" are species that are found only in the habitat type described in the section. [Habitat needed during their life cycle even though a significant portion of their life cycle is supported by other habitat types].

** "Other" is species that can be found in the habitat type described in the Nevada Partners in Flight Bird Conservation Plan.

No Action - Migratory bird species would not experience the long term benefits of the overall species diversity that the proposed treatments would create.

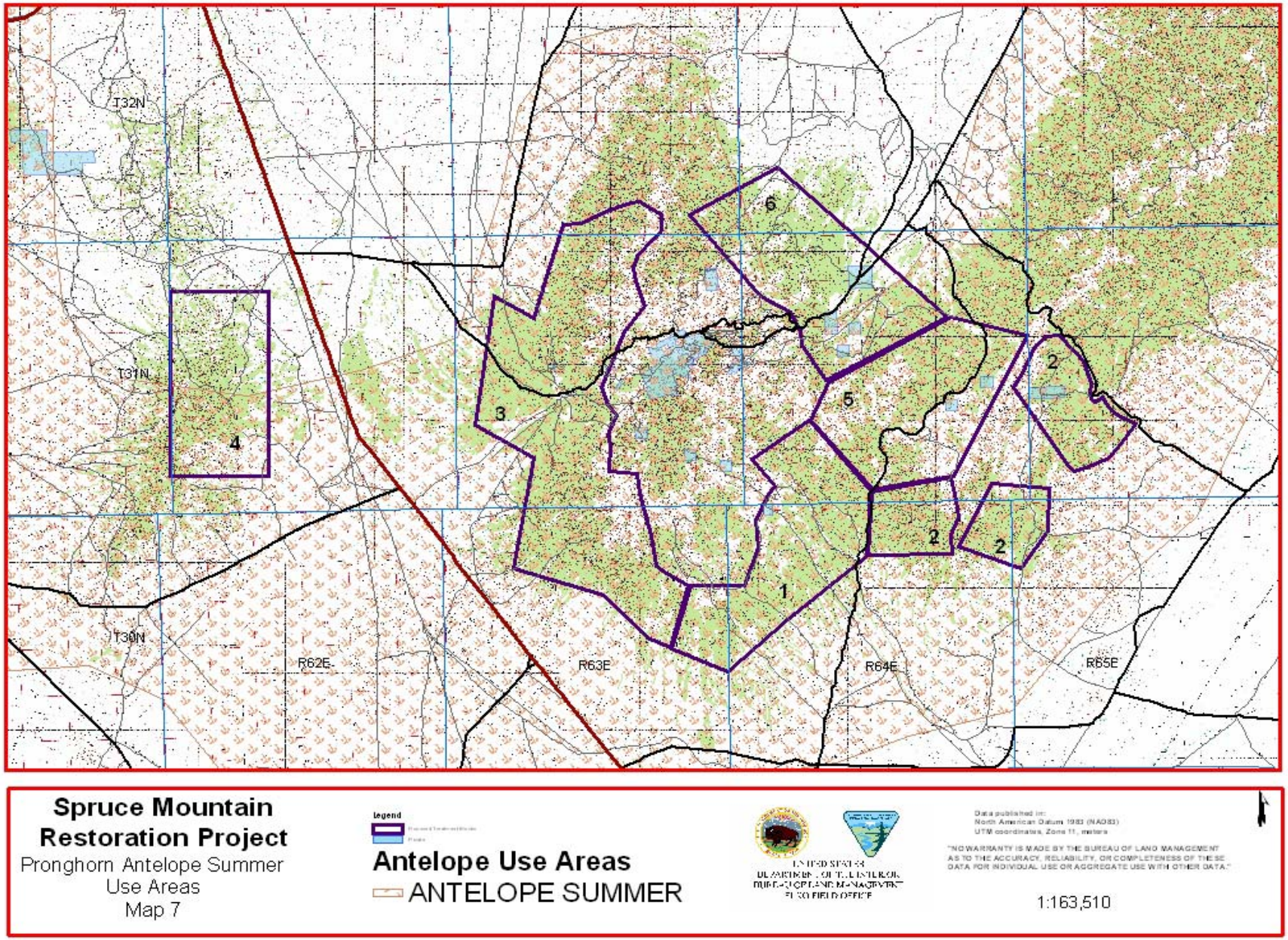
Proposed Action - Migratory birds make seasonal use of the public lands within the proposed project area. The greatest threat to these sagebrush-dependant migratory bird species is type conversion of sagebrush communities to monoculture pinyon/juniper woodlands. The existing ecological conditions (i.e. little or no herbaceous understory) are conducive to conversion to annual grasslands (i.e. cheatgrass types) following wildfire. The proposed treatments would create breaks in the pinyon/juniper fuel types, thus reducing the threat of large habitat losses to wildfire. The proposed mechanical treatments would not occur during the avian breeding season. Therefore, short term impacts would be minimal. Based on the existing ecological conditions and vegetation treatment objectives, the proposed action would have a positive long term benefit to migratory bird species.

3.2.14 Special Status Species

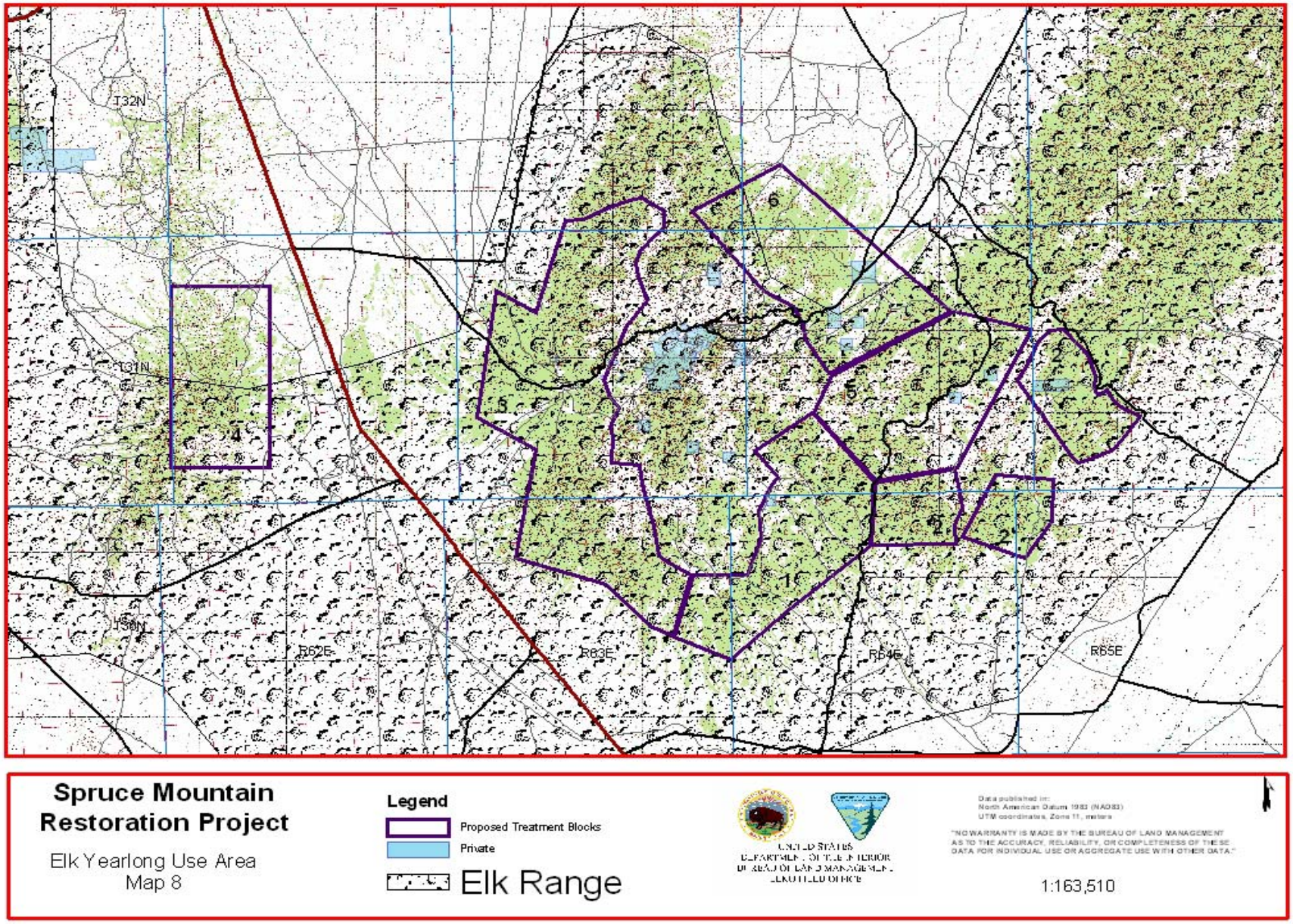
Special Status Species are identified as those listed or proposed for listing as threatened or endangered under the Endangered Species Act (ESA), species that are candidates for listing under the ESA, species that are listed by the State of Nevada, and species that are on BLM's list of Sensitive Species. Nevada BLM policy is to provide State of Nevada Listed Species and Nevada BLM Sensitive Species with the same level of protection as is provided for candidate species in BLM Manual 6840.06C. Per wording for Table IIa of BLM Instruction Memorandum No. NV-98-013, Nevada protected animals that meet BLM's 6840 policy definition are those species of animals occurring on BLM-managed lands in Nevada that are: (1) "protected" under authority of Nevada Administrative Codes 501.100 - 503.104; (2) have been determined to meet BLM's policy definition of "listing by a State in a category implying potential endangerment or extinction," and (3) are not already included as a federally listed, proposed, or candidate species.

There are no federally listed threatened, endangered, or candidate species known to exist within the project areas. Bald eagles (federally listed threatened) may be seen throughout the Elko Field Office District during the winter months. A historic roost site is located near the project area but outside the boundary of the proposed treatment areas. Ferruginous hawks, a BLM sensitive species are known to occur within the project area.

Map 7. Pronghorn Antelope Summer Use Areas.



Map 8. Elk Yearlong Use Area.



Based on the habitat types present within the proposed project area, the area is likely to support populations of sensitive species of raptors, bats, pygmy rabbits, burrowing owls, and migratory birds. Table 3 identifies those species which are likely or are known to occur in the proposed project area and their associated habitat types.

Table 3. **Special Status Species known or likely to occur within the Spruce Mountain Restoration Project Area.**

Common Name	Scientific Name	Habitat Type		
		Sagebrush[1]/grass	Mountain[2]/ Shrub	Pinyon/[3] Juniper
(USFWS) Federally Listed Threatened Species				
bald eagle (winter resident)	*Haliaetus leucocephalus*	**X**	**X**	**X**
BLM Sensitive Species				
golden eagle	*Aquila chrysaetos*	**X**	**X**	**X**
Western burrowing owl	*Athene cunicularia*	**X**		
ferruginous hawk	*Buteo regalis*	**X**		**X**
Swainson's hawk	*Buteo swainsonii*	**X**	**X**	
northern goshawk	*Accipiter gentilis*			**X**
peregrine falcon	*Falco peregrinus*	**X**	**X**	
prairie falcon	*Falco mexicanus*	**X**	**X**	
loggerhead shrike	*Lanius ludovicianus*	**X**	**X**	
vesper sparrow	*Poocetes gramineus*	**X**	**X**	
juniper titmouse	*Baeolophus griseus*			**X**
pinyon jay	*Gymnorhinus cyanocephalus*			**X,O**
gray vireo	*Vireo vicinor*			**X,O**
short-eared owl	*Asio flammeus*	**X**	**X**	
Northern long-eared owl	*Asio otus*	**X**	**X**	
sage grouse	*Centrocercus urophasianus*	**X,O**	**X**	
black rosy finch	*Leucosticte atrata*	**X**	**X**	
long-eared myotis	*Myotis evotis*			**X**
long-legged myotis	*Myotis volans*			**X**
little brown bat	*Myotis lucifugus*			**X**
small-footed myotis	*Myotis ciliolabrum*			**X**
fringed myotis	*Myotis thysanodes*		**X**	**X**
Pacific Townsend's big-eared bat	*Corynorhinus townsendii pallescens*			**X**
Brazilian free-tailed bat	*Tadarida braziliensis*		**X**	**X**
pallid bat	*Antrozous pallidus*	**X**		**X**
hoary bat	*Lasiurus cinereus*			**X**
pygmy rabbit	*Brachylagus idaohensis*	**X,O**		
big brown bat	*Eptesicus fuscus*	**X**	**X**	**X**
short –horned lizard	*Phrynosoma douglassii*	**X**		

O Obligate Species – Obligate species are species which are dependent on a specific habitat type to complete their life cycles. However, they may use other habitats as well.

[1] The Sagebrush/grass habitat type is dominated by big sagebrush, low sagebrush, shadscale, bud sage, and rabbitbrush, respectively. Associated grass species include: bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, needlegrass, and bottlebrush squirreltail. Forbs include arrowleaf balsamroot, lupine, phlox, and aster.

[2]The Mountain shrub habitat type can be found in the mid-upper elevations within the project area. Representative sagebrush species include: mountain big sagebrush, low sagebrush, and basin big sagebrush. The pre-dominant browse species are bitterbrush, snowberry and serviceberry. Associated grass species are bluebunch wheatgrass and Idaho fescue.

[3]Pinyon/Juniper habitat is dominated by stands of either singleleaf pinyon (*Pinus monopylla*) or any of four species of juniper including Utah (*Juniperus osteosperma*), Western (*J. occidentalis*), Rocky Mountain (*J. scopulorum*) or California (*J. californica*).

There is one known sage grouse lek within the project area. Sage grouse typically nest within two miles of the lek. Therefore, potential sage grouse nesting and early brood rearing habitat

also exists in the vicinity of the north east corner of Block 4. Ideal sage grouse breeding habitat is comprised of 15-25% canopy cover of sagebrush with a perennial herbaceous cover greater than seven inches and comprised of 15% grasses and 10% forbs. Within the pinyon-juniper communities, the stands are overstocked with closed canopies. While some have sparse understory, most have lost the majority of the herbaceous and shrub component. Most of the adjacent sagebrush communities contain over 30% canopy cover of sagebrush and while some areas still have a good component of native perennial grasses (15-30%) and forbs (5-30%), some areas have little to no understory (<5-10% herbaceous). A reduction in canopy cover within the pinyon-juniper communities would be necessary to improve understory grass and forb composition improving site characteristics for sage grouse use, as well as mule deer and other sagebrush obligate species. Refer to Maps 9, 10, and 11 for sage grouse habitat use areas.

The project area contains portions of the Ruby Valley and East Valley, sage grouse population management units (PMUs). Population estimates for the entire Ruby Valley PMU are 1,741 to 2,089; the general trend for this PMU has been downward for many years. The East Valley PMU has limited sage grouse habitat due to a large portion of the PMU being a salt desert scrub community divided by high, dry, mountain ranges. Population estimates for the entire East Valley PMU are 398 to 477; however, much of the area is unsurveyed. Pinyon juniper encroachment was identified in the "Elko County Sagebrush Ecosystem Conservation Strategy" as a moderate risk for sage grouse populations in the Ruby Valley PMU.

Pygmy rabbits are sagebrush obligates, most often associated with Basin big sagebrush. However, stands of Wyoming big sagebrush (often in proximity of riparian areas) also are used. Pygmy rabbits dig their own burrows and are usually found close to their burrow systems. Their primary food source is sagebrush, particularly in the winter. Grasses are more important in the summer. No pygmy rabbits have been documented within the project area; however, they have been documented in surrounding areas within vegetative types which are present in the proposed treatment area.

Burrowing owls are associated with areas of short grasses or shrubs, open sites and the availability of below-ground burrows for nesting. Primary prey for burrowing owls consists of vertebrates (mainly rodents) and invertebrates (mainly beetles). No burrowing owls have been documented within the proposed project area; however, they have been documented in surrounding areas within vegetative types which are present in the proposed treatment area.

Fifteen sensitive species of migratory birds (including raptors) are thought or known to occur within the project area on a seasonal basis. These species use a variety of habitats. Healthy upland habitats are essential to provide suitable nesting habitat, foraging areas and cover. Raptor species are dependent on these habitats to provide, habitat (cover and forage) for their prey base. Pinyon jays and gray vireos are pinyon-juniper obligates which are likely to occur within the project area and rely on the pinyon-juniper woodland to complete portions of their life cycle.

In general, bats use water between night-time foraging bouts. They utilize all habitat types found within the proposed project area for foraging and feed on a variety of nocturnal insects.

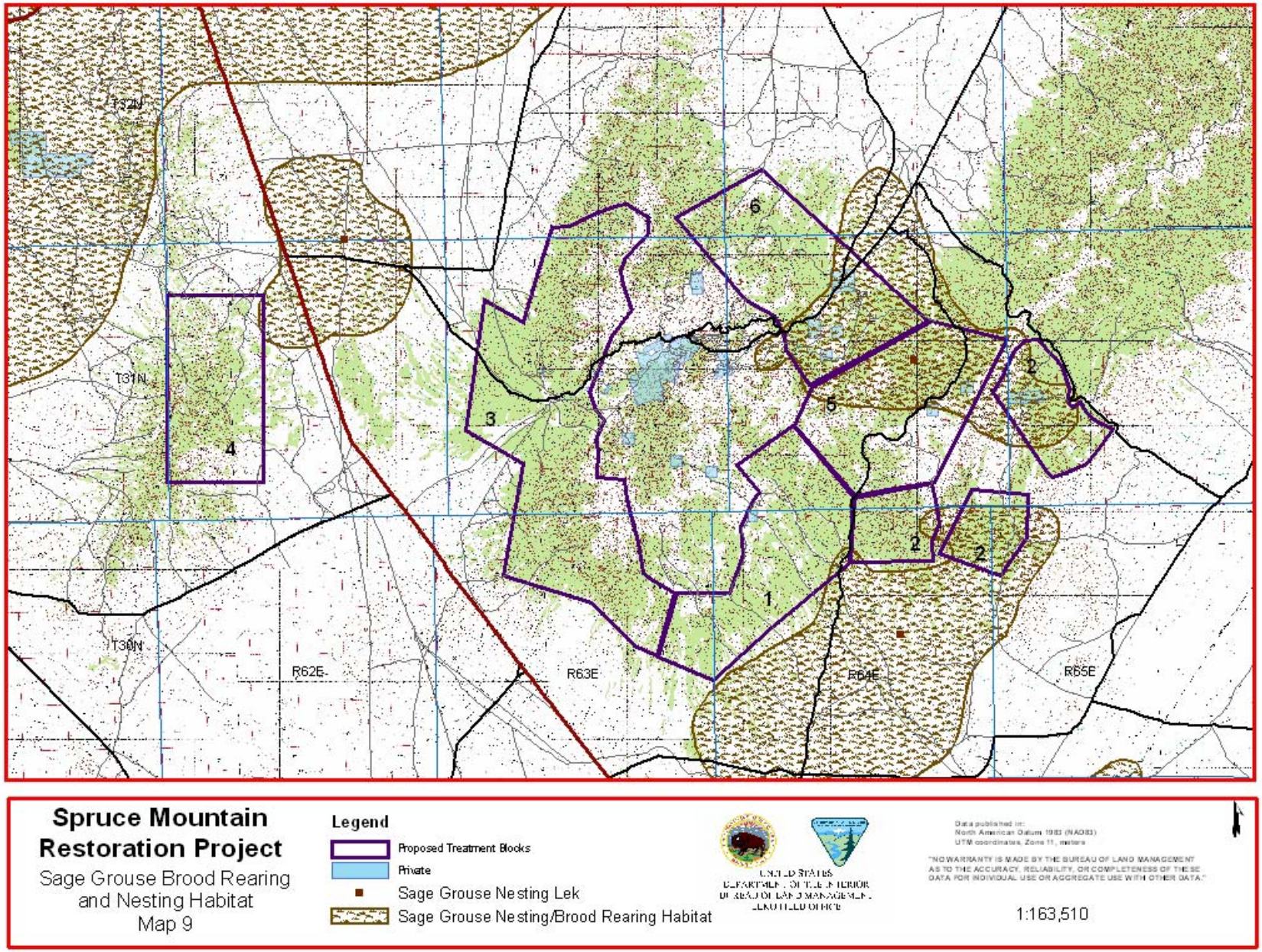
No Action - Improved breeding, brood rearing, and winter habitat for sage grouse would not occur without the proposed treatments. There would be no improved prey base to benefit bald eagles or ferruginous hawks.

Proposed Action - Based on the elevation of the proposed treatment areas, it is anticipated that there will be minimal impacts to Ferruginous hawk nests. Ferruginous hawk nests are mostly located in the lower elevations outside the project area. However, any nests that may occur within the project area will be avoided along with the habitat near the nests. Ferruginous hawk breeding productivity varies largely with prey availability. These hawks feed mainly on small mammals such as jackrabbits, cottontails, and ground squirrels. However, they will also feed on songbirds, grouse, snakes, lizards, and large insects. The proposed treatments would result in long term benefits to ferruginous hawks prey base by improving the current ecological condition from pinyon/juniper dominated vegetation types to a mosaic of shrub age classes and vegetation types, including improved shrub-grasslands within the project area. Implementation of the special design features would ensure that a buffer remains around active ferruginous hawk nests to ensure minimal impacts.

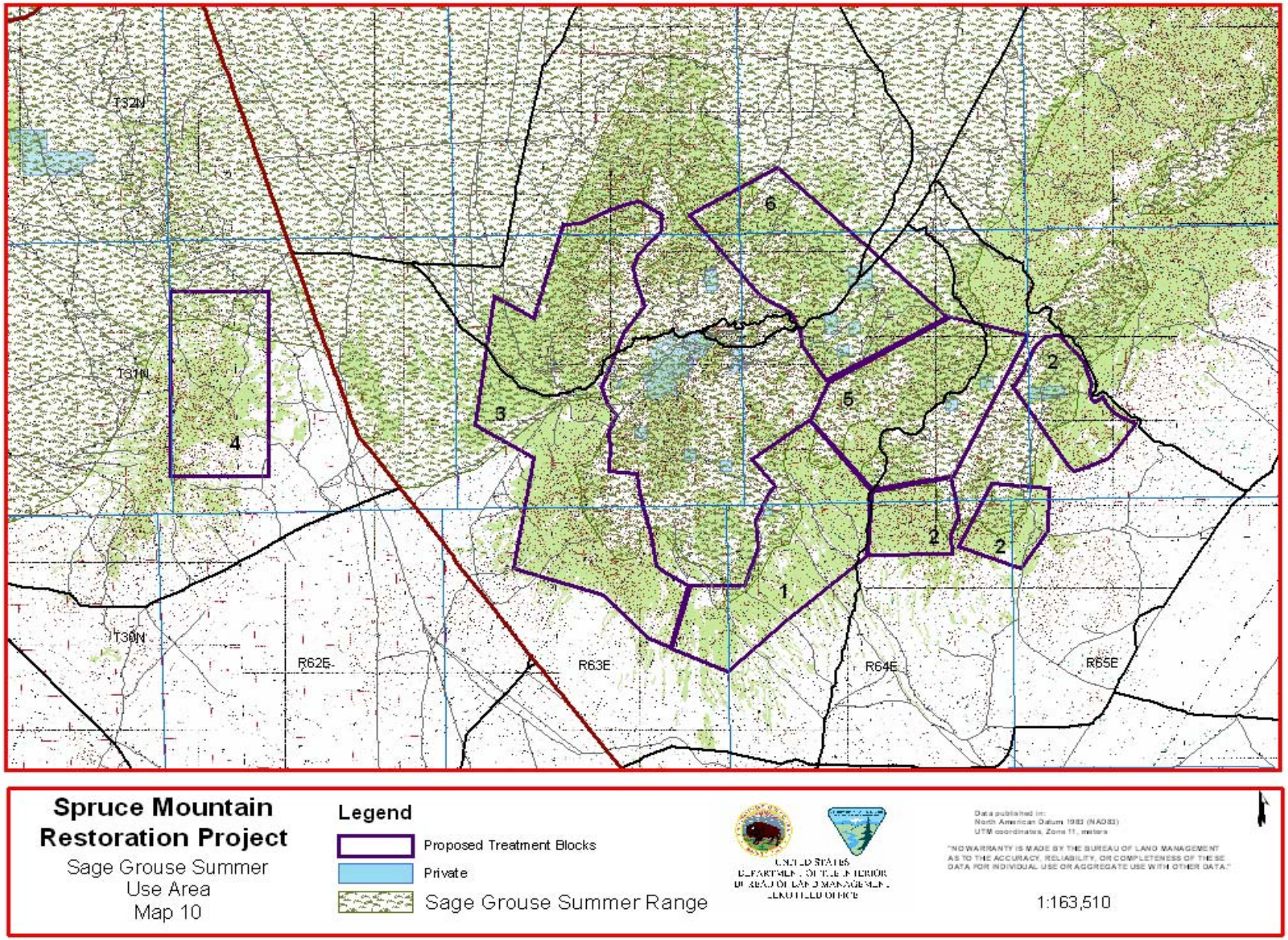
A reduction in canopy cover and pinyon-juniper encroachment would improve grass, forb, and sagebrush composition. The increased habitat diversity would continue to provide existing desirable habitat for pinyon-juniper obligates, while enhancing habitat for nesting, brood rearing, hiding, foraging, and prey base habitat for most sensitive game and nongame species, including sage grouse, bats, migratory birds, mammals, and birds of prey. Protection of the true historic woodland sites, which include mature pinyon pine trees that are an important source of pine nut production, would benefit sensitive species like pinyon jays and gray vireos.

Bald eagles are known to occur throughout the Elko District during the winter months (November-March), including the Spruce Mountain area. There are no known roost sites or other localized habitat areas within the proposed project area. Therefore, bald eagles would not be impacted by the proposed action.

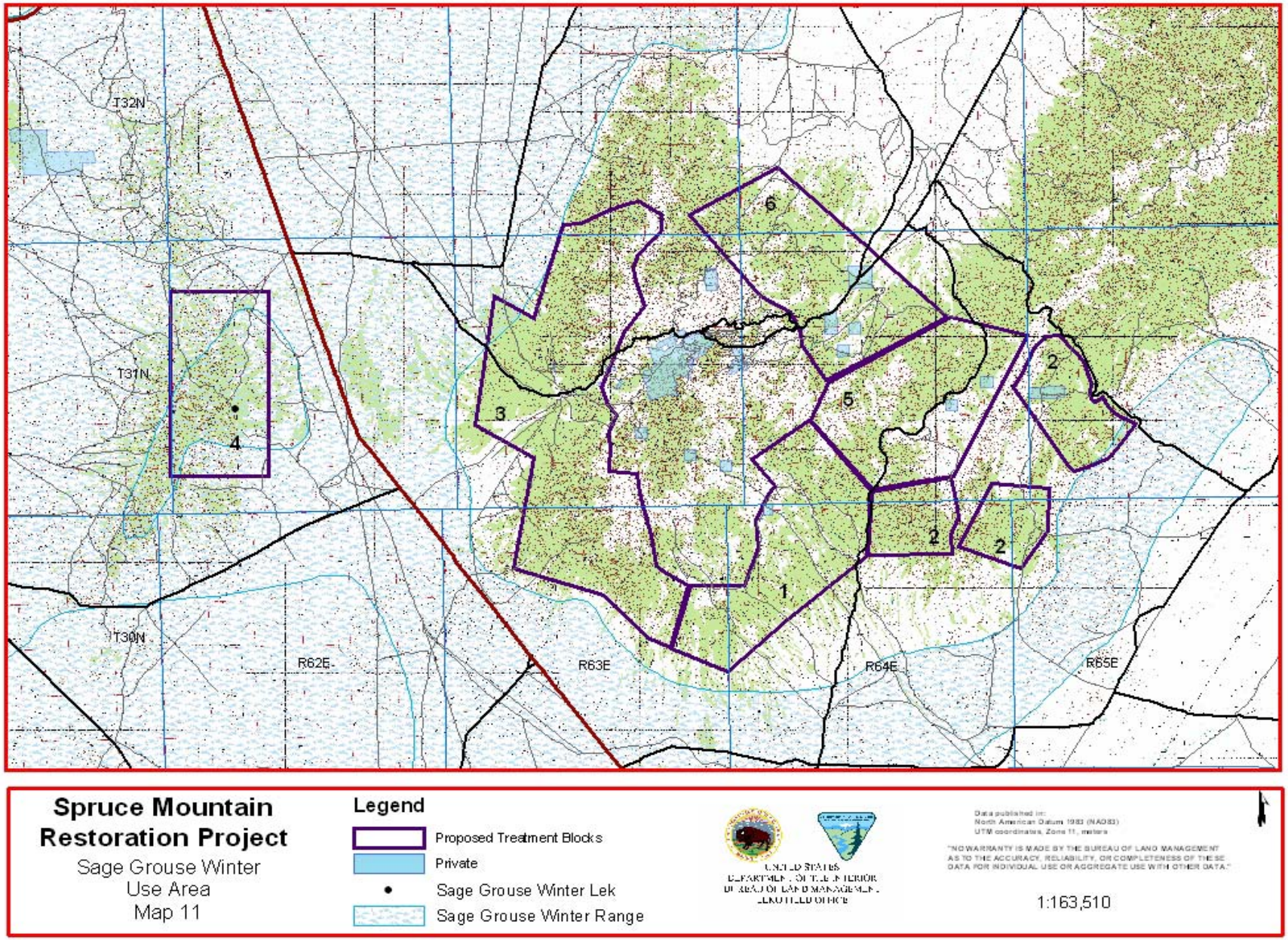
Map 9. Sage Grouse Brood Rearing and Nesting Habitat.



Map 10. Sage Grouse Summer Use Area.



Map 11. Sage Grouse Winter Use Area.



3.2.15 Cultural Resources

Several blocks of 1,000 to 2,000 acres each have been completed by the BLM along U.S. Highway 93 between Spruce Mountain and Valley Mountain within the past several years. These surveys were completed to implement a number of crested wheatgrass seedings, as well as to thin sagebrush to enhance the growth of native grasses. Prior to these, NDOT completed a survey along the U.S. Highway 93 corridor. These cultural surveys recorded a number of significant sites. Depending on the location of the proposed projects, there is a very high probability that similar significant and unique cultural features could be adversely impacted by the tree thinning procedures. As a result, cultural inventories will be required prior to project approval in order to avoid significant sites.

No Action - No significant cultural resources would be impacted as a result of the No Action Alternative.

Proposed Action - Cultural resources reports meeting the standard BLM Guidelines and the Protocol Agreement between BLM and the Nevada SHPO will be written following the surveys of each block or treatment area. The BLM will determine those sites eligible for the National Register of Historic Places. Following these determinations, each project boundary will be re-flagged to avoid all eligible properties. The size of buffer zones to protect eligible sites will be determined by a BLM archaeologist based on the nature of each site. Because all eligible sites will be completely avoided, the project would have no adverse effect to significant cultural properties.

3.2.16 Native American Religious Concerns

No specific culturally sensitive areas were identified by participating Tribal representatives as being present, within, or near the boundaries of the proposed project. However, Tribal representatives have listed (in general) tribal resources, activities, and associated spiritual beliefs that do exist in the Spruce Mountain area. This information is considered highly confidential and files are secured at the BLM Elko Field Office.

In light of several other projects proposed in the Spruce Mountain area, including the proposed designation of an OHV trail, communications and contacts continue with participating tribal entities.

No Action - With the No Action Alternative, there would be no potential for adverse effect to sacred places or to areas of traditional importance to the Western Shoshone.

Proposed Action – While no specific areas of concern were identified by participating Tribal representatives as being present, within, or near the boundaries, of the proposed project, general locations of tribal resources and cultural use sites and associated spiritual beliefs were given for the entire Spruce Mountain area. A representative of the BLM cultural staff will be part of the team to evaluate each site for most appropriate treatment type and resource protection measures, which will include tribal and cultural resources. In addition, as site-specific treatments are designed, BLM cultural staff, along with Tribal representatives, would monitor project activities on a treatment-specific basis to ensure that BLM does not compromise the physical and spiritual integrity of any possible traditional/cultural/spiritual use sites and associated activities. In order

to limit, reduce, or possibly eliminate any adverse effects to tribal resources and spiritual sites, Spruce Mountain Restoration treatments should remain flexible.

Communications with local Western Shoshone tribe entities have determined that the Wells Band of the Te-Moak Tribe of Western Shoshone will be the most active participant in addressing tribal issues and concerns within the areas in question. Detailed tribal participation, communication, and coordination files are located at the BLM Elko Field Office and are considered strictly confidential.

Having been a major hunting corridor utilized by Western Shoshone hunters in the past, the Spruce Mountain area is the site of multiple antelope traps, hunting/pine nut camps, and associated hunting and gathering implements (points, etc.). It is the belief of many Western Shoshone that "artifacts" left by their ancestors is the "writing on the Earth", which documents their existence and history of the living culture. Communications with tribal entities have established their general concern over water. Water sources (rivers, streams, hot and cold springs, etc.) are known to house certain spirits that still impact actions and beliefs of contemporary and traditional Western Shoshone. Most of the natural water sources on Spruce Mountain are on private lands and are located outside of the proposed project area. No treatments are proposed near natural water sources.

Improving wildlife habitat as a result of this project may increase wildlife use and may also increase public use to observe wildlife, especially in combination with other proposed activities in the Spruce Mountain area, like the proposed designation of an OHV trail. Consequently, impacts to known and unknown traditional cultural properties may increase. Spiritual, traditional, and cultural activities and sites remain intact due to their remoteness, a lack of general public knowledge, the maintenance of physical and spiritual integrity, and through passage of such knowledge to the younger generations.

Archaeological data supports past cultural and traditional use in the Spruce Mountain area and also appears to be consistent with ethnographic information shared by tribal members. Due to the sensitive and secretive nature of sacred tribal activities, resources, and locations, the public must be made aware of the possible impacts they can cause by not conforming to the stipulations and mandates that govern BLM actions regarding cultural resource preservation and Native American Religious Freedom. The public should be diverted from water sources, which most often are surrounded by artifacts, are considered sacred, and are utilized by wildlife. Any public member who encounters spiritual leaders and/or elders conducting ceremonies or other cultural/traditional practices, the utmost respect and avoidance should be practiced. BLM must make every effort to limit, reduce, or possibly eliminate negative impacts to tribal activities, ceremonies, and traditional use sites such a pine nut harvesting activities and camps, edible and medicinal plant gathering locations and associated activities, spiritual ceremonies associated with hot and cold spring sources, and other tribal activities of a spiritual, traditional, and sacred nature.

Tribal members have also expressed concerns regarding wildlife migration routes and mule deer winter range. With an increase in use by the public, wildlife may also suffer from added stress.

Again, since water is limited in the area and is considered the "lifeblood of the earth and all who swell upon it", the public should be diverted from water sources.

As with cultural resources, an interpretive program should be implemented to educate the public of the diverse Native American uses of the area (specific locations and detailed activities are not to be shared with the public). This may help foster respect and understanding of cultures that may differ from their own. Communication and coordination will be maintained throughout the development of the project (and any subsequent monitoring) between BLM personnel and participating Tribal Councils, staff, and community members.

3.3 Cumulative Impacts

All resource values have been evaluated for cumulative impacts within each of the above sections.

3.4 Monitoring

The monitoring described in the Proposed Action is sufficient for this action.

4 – CONSULTATION AND COORDINATION

4.1 List of Preparers

Leticia Lister, Project Lead
Carol Marchio - Air Quality, Water Quality, and Soils
Mark Coca – Invasive, Non-native species
Bryan Hockett – Cultural Resources
Gerald Dixon – Native American Religious Concerns
Kevin Albrecht/Wendy Fuell – Threatened, Endangered, and Special Status Species, Migratory Birds, and Wildlife
Deb McFarlane – Wastes (Hazardous/Solids)
Steve Dondero – Wilderness, Visual Resources, and Recreation
Bryan Fuell – Wild Horses
D.J. Beaupeurt – Lands
Bruce Thompson – Range, Vegetation
Tom Reid – Forestry/Forest Products
Lorrie West – Land Use Plan Conformance and NEPA Compliance

4.2 Persons, Groups, and Agencies Consulted

Nevada Department of Wildlife
- Steve Foree
- Pete Bradley
- Tony Wasley

Spruce Allotment Permittees – Von L. and Marian Sorensen, c/o Jared Sorensen

Valley Mountain Allotment Permittee – Kenneth Jones

Elko Convention and Visitors Authority, Recreation Trails Committee
- Doug Madden
- Ralph McMullen

Northeast Nevada Stewardship Group
Elko Bighorns Unlimited
Nevada Bighorns Unlimited – Reno Chapter
Rocky Mountain Elk Foundation
Mule Deer Foundation
Nevada Wildlife Heritage Program (Account)
Placer Dome U.S.

Tribes
- Ely Shoshone Tribe
- Te-Moak Tribe of Western Shoshone
- South Fork Band
- Wells Band

Battle Mountain Band
Elko Band
Duck Valley Sho-Pai Tribe
Duckwater Shoshone Tribe

4.3 Coordination with Other Agencies and Tribes

Development of the project was completed in cooperation with wildlife biologists from the NDOW.

On May 20, 2004, at the monthly Western Shoshone Information Meeting, the project proposal for the Spruce Mountain Restoration Project was presented to the group. Representatives from the Wells Band, Elko Band, Duckwater Shoshone Tribe, South Fork Band, Battle Mountain Band, and Te-Moak Tribe of Western Shoshone attended the information meeting. At the meeting, no concerns were raised for impacts to sites of religious importance to the tribes. However, interest was high among the attendees for the portion of the project that was proposed to be completed under a stewardship contract. The stewardship contract portion of the project was completed under a separate NEPA document (BLM/EK/CX-2004/027, Spruce Mountain Stewardship Project). Coordination is ongoing with eight local tribes in the area.

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Appendices and Maps

Appendix 1 – Fire Prevention Activities for Polygons as identified in the Fire Management Amendment.

Appendix 2 – Special Status Species Definitions and BLM Policy

Maps

1. General Vicinity Map
2. Project Map
3. Mule Deer Migration Route and Use Areas
4. 200-Ft. Buffer Roads, VRM Classes, and WSA Boundary
5. Invasive Non-native Species, HMA, and Allotment Boundaries
6. Dominant Vegetation Communities
7. Pronghorn Antelope Summer Use Area
8. Elk Yearlong Use Area
9. Sage Grouse Brood Rearing and Nesting Habitat
10. Sage Grouse Summer Use Area
11. Sage Grouse Winter Use Area